

P-M

Pan American Petro./Tohlacon-Navajo
NE/4-SW/4 Sec. 11 T40N-R25E
Apache County

60

County Apache

Area _____

Lease No. 14-20-603-4178

Well Name Pan American Petroleum Company/Tohlacon-Navajo

Location NE SE Sec 11 Twp 40N Range 25E Footage 760' FEL 1980' FSL
LS DF Spud Completed Total
Elev. 5297 Gr 5307 KB Date 9-10-58 Abandon 12-30-58 Depth 6598'

Contractor _____

Drilled by Rotary X
Cable Tool _____

Casing Size Depth Cement

17 1/2" 886' 1020sx

Production Horizon _____

12 1/2" 2000' _____

Initial Production P & A

5 1/2" 6598' 650sx

REMARKS _____

Elec
Logs IE; GRN; Sonic; Microlatero
Applic. Plugging Completion
to Plug X Record X Report X

Sample Log Amstrat
Sample Descript. 4587
Sample Set 1-1010 P-377
Core Analysis _____
DSTs _____

Water well accepted by _____

Bond Co. & No. Seaboard Surety Company Bond #672765

Bond Am't \$ 25,000 Cancelled 10-7-70 Date Organization Report X

Filing Receipt 53246 Dated 8-21-58 Well Book X Plat Book X

API No. _____ Loc. Plat X Dedication E/2 SE/4

Sample 377
587
1544

Permit Number 60

Date Issued 8-28-58

Twps 40n-25e
Section 11
ne se
1980 n/s 760 w/e

OPR:	Pan American Pet; Phillips-Sinclair	WELL #:	1 Keoh-Lacon-Navajo
ELEV:	5307 DF.	DSTS. & CORES:	SPUD: 9-10-59 COMPL: 12-30-59
*TOPS:	Log Sketch	DST 3025-3123, 1-1/4 hrs, rec 10 very sli oil & GCM, FP 70#, SIP (30 min) 45#. DST 4027-82, 1 hr rec 20 mud, FP 45#, SIP (45 min) 45#. DST 4222-4340, 1 hr, rec 20 sli GCM, FP 75#, SIP (45 min) 75#. DST 4336-4426, 1 hr, rec 15 mud, FP 15#, SIP (45 min) 15#. DST 4422-4530, 1 hr, rec 10 mud, FP 30#, SIP (45 min) 30#. DST 4558-4700, 1 hr, rec 10 mud, FP 15#, SIP (45 min) 15#. DST 4896-4796, 1 hr, rec 5 mud, FP 15#, SIP (45 min) 15#. Crd 4822-64, bbl jammed, rec 42-2 1/2 ls, foss, tight; 1 ls, scattered good poro; 2 1/2 ls, foss; 2 ls, arg, sli foss; 5 ls, foss; 1 ls, 2000000000 arg; 3 ls, arg & foss; 2 ls, 2 ls; 1 ls dolo, sucrosic; 3 dolo, sucrosic, sandy, mica; 3 ls arg; 2 ls, cherty; 5 ls. Crd 4864-96, bbls jammed, rec 32-6 ls, foss, 6 ls, arg, foss; 3 ls, very sandy, foss; 5 sh, silty, sli calc; 3 ls foss; 6 ls, scattered pp & vug; poro, scattered stain & fluor, bleeding oil from fractures; 3 ls as above, bleeding oil. Crd 4896-4946, rec 50-8 ls, arg; 8 ls, as above w/scattered ppp, bleeding oil; 14 ls, foss, arg; 6 sh, cherty, foss, sli calc; 1 sh silty; 6 ls, arg, 7 ls, arg, fractured, trace poro, bleeding oil. DST 4895-4946, 3 hrs, rec 90 GCM, 25 oil, FP 45-60#, SIP (45 min) 245#. Crd 4946-62, bbl jammed, rec 14-8 ls, silty, pp & vug poro, fractured, bleeding; (over) Ariz 18-067010	
	Moenkopi 1604 DeChelly 1848 Cutler 2356 Hermosa 3877 Paradox 4553 Desert Creek 4640 Akah 4787 Barker 4967 Molas 5371 Mississippian 5452 Elbert 5910 McCracken 6140 Aneth 6230 Cambrian 6353 preCambrian 6524		

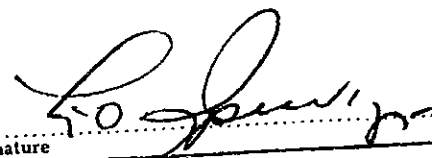
PAN AMERICAN PET; PHILLIPS-SINCLAIR #1 KEOH-LACON-NAVAJO, ne se 11-40n-25e,
APACHE COUNTY, ARIZ. A - 2.

oil from fractures & vugs; 6 1/2 ls, fractured, tight. DST 4946-62, 4 hrs, rec 40 oil, 15 GCM, 120 salt wtr, FP 35-70#, SIP (45 min) 1385#. Crd 4962-5022, rec 60-3 1/2 ls, arg; 5 1/2 ls, fractured; 4 dolo, fractured foss; 1 ls, dolo, foss, 7 ls, dolo, foss, cherty; 2 ls, sli dolo, fractured; 5 sh, sli dolo, foss, silty; 6 dolo, fractured; 11 ls, sli silty, foss, fractured; 14 sh, pokerchip; 2 dolo, sli silty. DST 4964-5102, 3 hrs, rec 480 G&WCM w/rainbow of oil, FP 105-208#, SIP (45 min) 1745#. Crd 5102-62, rec 50-3 ls, w/sh stringers; 1 dolo, tight; 3 ls, w/sh inclusions, very sli bleeding salt wtr; 8 ls, sli ppp, fractured carb; 17 ls, foss, sli ppp, fractured, strolitic; 1 dolo, tight; 8 sh, sli calc; 7 ls, fractured; 2 ls, fractured. Crd 5162-97, bbl jammed, rec 31 1/2-9 ls, fractured, foss; 6 ls, interbedded w/dolo; 2 sh w/ls inclusions; 11 ls w/dolo arg, 3 1/2 ls, fractured, trace ppp. DST 5105-97, 3 1/2 hrs, rec 495 W&GCM, 1000 salt wtr, FP 140-695#, SIP (45 min) 1580#. DST 5195-5300, 2 hrs, rec 455 WCM, 1550 salt wtr, FP 175-935#, SIP (45 min) 1590#. DST 5295-5390, 1 1/2 hrs, rec 30 mud, FP 35#, SIP (45 min) 35#. Crd 5505-31, rec 23-12 ls, fractured, trace yellow fluor, tight; 6 ls, patches of fair to good vug poro; 5 ls, sli cherty. Crd 5531-41, rec 2 ls, sli oolitic & shaley. DST 5460-5541, 4 hrs, rec 350 very sli WCM, 436 salt WCM, w/sli show of gas & light rainbow of oil, FP 105-385#, SIP (45 min) 1765#. Crd 5680-5713 1/2, rec 33 1/2-3 ls, sli dolo, fractured, foss w/scattered trace of ppp; 6 ls, sli foss, trace of poor pp & vug poro, fractures, sli stain & fluor; 1 dolo, 14 ls, cherty, sh inclusions, scattered fluor & stain, 3 dolo, 1 ls, 1 dolo, 1 ls, foss; fractured; 1 dolo, fractured; 2 1/2 ls, fractured. DST 5583-5713, 3 hrs, rec 336 sli WCM, 180 WCM, 180 salt wtr, FP 85-350#, SIP (30 min) 1750#. DST 5736-5890, 3 1/2 hrs, rec 458 salt wtr cut mud, 3622 salt wtr, FP 225-1875#, SIP (45 min) 1905#. DST 5901-6010, 3 hrs, rec 474 salt wtr, cut mud w/very sli show of gas & light rainbow of oil, 180 salt wtr, FP 110-365#, SIP (30 min) 2090#. DST 6070-6225, 3 1/2 hrs, rec 1100 mud, 2900 highly salt wtr cut mud, FP 575-1825#, SIP (30 min) 2075#. Crd 6239-86, rec 47 dolo, strolitic, fractured, trace of pp & vug poro, bleeding live oil from vugs & fractures. DST 6230-86, 4 hrs, rec 2 oil, 320 GO&WCM, FP 35-175#, SIP (45 min) 1800#. Crd 6286-6325, rec 37-5 dolo, shaley, trace of fair pp & vug poro, 6 dolo, shaley, 4 dolo, very shaley, 1 dolo, strolitic; 10 dolo, shaley as above; 1 dolo, trace poor vug poro, dead oil stain, 3 dolo, fractured, black sh partings; 3 dolo, as above, 4 dolo, dead oil stain, faint sulfur odor.

(over)

PAN AMERICAN PET: R LIPS-SINCLAIR #1 KEOH-LACON-NAVAJO, se 11-40n-25e,
APACHE COUNTY, ARIZONA - 3.

DST 6286-6362, 3½ hrs, rec 17, gas & salt wtr cut mud, 2625 salt wtr, FP 105-1295#, SIP (45 min) 2145, (30 min) 2110#. DST 6430-6508, 4 hrs, rec 1440 sli salt wtr cut mud, 290 highly salt wtr cut mud, FP 455-870#, SIP (45 min) 3040#, (30 min) 1835#. Perf 6230-53 w/4 per ft; set pkr @ 6182. Acidized w/500. Swbd 15 hrs, rec 38 bbls load & acid wtr; 42 bbls salt wtr w/very sli show dead black oil. Swbd 15 hrs, rec 23 bbls salt wtr. Reset pkr @ 6130, squeezed perfs. Perf 5489-5528 w/4 per ft; set pkr @ 5467. Acidized w/500. Swbd 24 hrs, rec 21 bbls load wtr, 12 bbls acid wtr. Swbd 6 hrs, rec 6 bbls salt wtr, 5 bbls oil. Reacidized w/2000; swbd 14½ hrs, rec 21 bbls load wtr, 37 bbls acid wtr. Swbd 19 hrs, rec 32 bbls heavy black oil, 19 bbls salt wtr. Perf 5296-5332 w/2 per ft; set pkr @ 5281. Acidized w/500; swbd 25 hrs, rec 22 bbls load wtr, 12 bbls acid wtr, 40 bbls salt wtr. Reset pkr @ 52-48, squeezed. Perf 5194-5216 w/4 per ft. Set pkr @ 5186. Acidized w/500; swbd 24 hrs, rec 32 bbls load & acid wtr, 122 bbls salt wtr. Reset pkr @ 5090 & squeezed. Perf 4942-60 w/4 per ft; set pkr @ 4901. Acidized w/500 swbd 50 hrs, rec 31 bbls load & acid wtr, 33 bbls salt wtr, 12 bbls oil. Reacidized w/2000; swbd 15 hrs, rec 68 bbls load & acid wtr, 72 bbls salt wtr, 12 bbls oil. Reset pkr @ 4920, squeezed. Perf 4826-36, 4866-74, 4890-96 w/4 per ft. Set pkr @ 4816, acidized w/2500. Swbd 37 hrs, rec 46 bbls load & acid wtr w/sli trace of oil in last 30 hrs. Swbd dry. Reset pkr @ 4722, squeezed. Perf 4016-24 w/4 per ft. Set pkr @ 3988; acidized w/1000. Swbd 11 hrs, rec 16 bbls load wtr, 8 bbls acid wtr, swbd dry. Reset pkr @ 3896, squeezed.

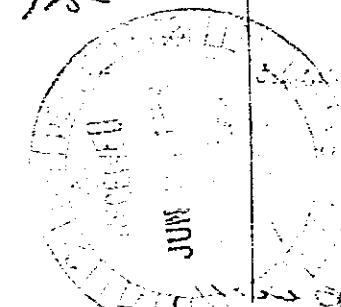
WELL COMPLETION OR RECOMPLETION REPORT AND WELL LOG									
DESIGNATE TYPE OF COMPLETION: Temporarily Abandoned December 30, 1958									
New Well <input checked="" type="checkbox"/>	Work-Over <input type="checkbox"/>	Deepen <input type="checkbox"/>	Plug Back <input type="checkbox"/>	Same Reservoir <input type="checkbox"/>	Different Reservoir <input type="checkbox"/>	Oil <input type="checkbox"/>	Gas <input type="checkbox"/>	Dry <input type="checkbox"/>	
DESCRIPTION OF WELL AND LEASE									
Operator Pan American Petroleum Corporation				Address P. O. Box 487, Farmington, New Mexico					
Lease Name Tohlacon Navajo				Well Number 1		Field & Reservoir Wildcat			
Location 1980 NSL & 760 WEL - Section 11, T-40-N, R-25-E, Gila & Salt River									
County Apache	Permit number 60	Date Issued August 28, 1958	Previous permit number ---		Date Issued ---				
Date spudded Sept. 10, 1958	Date total depth reached Dec. 6, 1958	Date completed, ready to produce ---	Elevation (DF, RKB, RT or Gr.) RKB 5308		Elevation of casing hd. flange GL 5296				
Total depth 6598	P.B.T.D. 3921	Single, dual or triple completion? ---		If this is a dual or triple completion, furnish separate report for each completion.					
Producing interval (s) for this completion ---			Rotary tools used (Interval) 0-6598		Cable tools used (Interval) ...				
Was this well directionally drilled? No		Was directional survey made? ---		Was copy of directional survey filed? ---		Date filed June 22, 1959			
Type of electrical or other logs run (check logs filed with the commission) Induction-Electric, Gamma Ray-Neutron, Sonic Log, Microlaterolog									
CASING RECORD									
Casing (report all strings set in well—conductor, surface, intermediate, producing, etc.)									
Purpose	Size hole drilled	Size casing set	Weight (lb./ft.)	Depth set	Sacks cement	Amt. pulled			
Surface	17 1/2" to 886	13-3/8" H-40	48	886	1020				
Producing	12 1/4" to 2000'	(no intermediate casing run)		6595	650				
TUBING RECORD									
Size	Depth set	Packer set at	Size	Top	Bottom	Sacks cement	Screen (ft.)		
---	---	---	---	---	---	---	---		
PERFORATION RECORD									
Number per ft.	Size & type	Depth Interval							
(See Attachment)									
ACID, SHOT, FRACTURE, CEMENT SQUEEZE RECORD									
Am't. & kind of material used					Depth Interval				
(See Attachment)									
INITIAL PRODUCTION									
Date of first production		Producing method (indicate if flowing, gas lift or pumping—if pumping, show size & type of pump:)							
Date of test	Hrs. tested	Choke size	Oil prod. during test	Gas prod. during test	Water prod. during test	Oil gravity			
			bbls.	MCF	bbls.	° API (Corr)			
Tubing pressure	Casing pressure	Cal'd rate of Production per 24 hrs.	Oil	Gas	Water	Gas-oil ratio			
			bbls.	MCF	bbls.				
Disposition of gas (state whether vented, used for fuel or sold):									
<p>CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the Area Superintendent of the Pan American Petroleum Corporation company, and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.</p>									
Date June 22, 1959				Signature 					
				<p style="text-align: center;">STATE OF ARIZONA STATE LAND COMMISSIONER</p> <p style="text-align: center;">Well Completion or Recompletion Report and Well Log</p> <p style="text-align: center;">Form No. P-7</p> <p style="text-align: center;">Authorized by Order No. 4-6-59</p> <p style="text-align: center;">Effective April 6, 1959</p>					

DETAIL OF FORMATIONS PENETRATED

Formation	Top	Bottom	Description*
Shallow			
Sands & Shales	0	1431	
Shinarump	1431	1604	
Moeukopi	1604	1848	
Dechelly	1848	2356	
Cutler	2356	3877	
Hermosa	3877	4567	
Paradox	4567	5371	
Molas	5371	5452	
Mississippian	5452	5910	
Devonian	5910	6069	
McCracken	6069	6230	
Aneth	6230	6384	
Cambrian	6384	6524	
Pre-Cambrian	6524	6598	

(See Attachment for Coring Record, Drillstem Test Record, and Stimulation and Testing Record).

98501



* Show all important zones of porosity, detail of all cores, and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

INSTRUCTIONS:

Attach drillers log or other acceptable log of well.

This Well Completion or Recompletion report and well log shall be filed with the State Land Commissioner not later than thirty days after project completion.

PLUGGING RECORD									
Operator Pan American Petroleum Corporation				Address P. O. Box 487, Farmington, New Mexico					
Name of Lease Tohlacon Navajo				Well No. 1		Field & Reservoir Wildcat			
Location of Well 1920' NSL & 760' NSL				Sec-Twp-Rge or Block & Survey Section 11, T-40-N R-25-E				County Apache	
Application to drill this well was filed in name of Pan American Petroleum Corporation			Has this well ever produced oil or gas No		Character of well at completion (Initial production): Oil (bbls/day) None Gas (MCF/day) None		Dry? Yes		
Date plugged: April 19, 1960			Total depth 6593'		Amount well producing when plugged: Oil (bbls/day) None Gas (MCF/day) None		Water (bbls./day) None		
Name of each formation containing oil or gas. Indicate which formation open to well-bore at time of plugging		Fluid content of each formation		Depth interval of each formation		Size, kind & depth of plugs used. Indicate zones squeeze cemented, giving amount cement.			
None									
CASING RECORD									
Size pipe	Put in well (ft.)	Pulled out (ft.)	Left in well (ft.)	Give depth and method of parting casing (shot, ripped etc)	Packers and shoes				
13-3/8"	886'	-	886'						
5-1/2"	6595'	-	6595'						
Was well filled with mud-laden fluid, according to regulations?				Indicate deepest formation containing fresh water.					
NAMES AND ADDRESSES OF ADJACENT LEASE OPERATORS OR OWNERS OF THE SURFACE									
Name		Address				Direction from this well:			
In addition to other information required on this form, if this well was plugged back for use as a fresh water well, give all pertinent details of plugging operations to base of fresh water sand, perforated interval to fresh water sand, name and address of surface owner, and attach letter from surface owner authorizing completion of this well as a water well and agreeing to assume full liability for any subsequent plugging which might be required.									
Use reverse side for additional detail File this form in duplicate with the State of Arizona Oil & Gas Conservation Commission (See reverse side)									
CERTIFICATE: I, the undersigned, under the penalty of perjury, state that I am the <u>Area Engineer</u> of the Pan American Petroleum Corporation , and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.									
Date April 25, 1960 <i>Wjm</i>				Signature <i>RMBauer Jr.</i>					
STATE OF ARIZONA OIL & GAS CONSERVATION COMMISSION									
Form No. P-15 Plugging Record File two copies Authorized by Order No. <u>4-6-59</u> Effective <u>April 6,</u> 19 <u>59</u>									

DETAILS OF WORK

Since commercial production was not obtained, Tohlacon Navajo No. 1 was plugged and abandoned as follows on April 19, 1960:

1. Filled hole with fluid.
2. Spotted 100 sacks 4 percent gel cement plug with 2 percent calcium chloride 5-1/2" - 13-3/8" annulus and squeezed with 800 psi.
3. Spotted 5 sacks cement for surface plug (0-40') and erected dry hole marker.
4. Plug and abandonment by above procedure proposed to permit possible future re-entry in the event other zones are discovered to be productive in the area.

APPLICATION TO ABANDON AND PLUG

FIELD Wildcat
 OPERATOR PAN AMERICAN PETROLEUM CORPORATION ADDRESS Box 487, Farmington, New Mexico
 LEASE Toblacon Navajo WELL NO 1 COUNTY Apache
 SURVEY G. & S. R. E. & M. SECTION 11 DRILLING PERMIT NO 60
 LOCATION 1980 NSL & 760 WEL-Section 11, T-40-S, R-25-E

TYPE OF WELL Dry hole TOTAL DEPTH 6598
 (Oil, Gas or Dry Hole)

ALLOWABLE (If Assigned)
 LAST PRODUCTION TEST OIL (Bbls.) Water (Bbls.)
 GAS (MCF) DATE OF TEST

PRODUCING HORIZON PRODUCING FROM TO

1. COMPLETE CASING RECORD 13-3/8" 48 pound H-40 was set at 886' with 1020 sacks of cement.
5-1/2" 14 & 15.5 pound J-55 was set at 6595' with 650 sacks of cement.

2. FULL DETAILS OF PROPOSED PLAN OF WORK (See Reverse)

If well is to be abandoned, does proposed work conform with requirements of Rule 202? Yes If not, outline proposed procedure above.

DATE COMMENCING OPERATIONS When approval received
 NAME OF PERSON DOING WORK Company representative ADDRESS Box 487, Farmington, New Mexico
 CORRESPONDENCE SHOULD BE SENT TO Pan American Petroleum Corporation

Box 487, Farmington, New Mexico
 NAME R.M. Bauer, Jr.
 TITLE Area Engineer

Date approved 3/31/60
Wjmaub

STATE LAND COMMISSIONER

STATE OF ARIZONA, STATE LAND COMMISSIONER
 Application to Abandon and Plug
 Form No. 15A File 2 copies.
 Authorized by Order No. 4-6-59
 Effective April 6, 1959

Tohlacon Navajo No. 1 was drilled to total depth 6598' with 5-1/2" casing set at 6595'. Top of cement behind pipe at 3520'. The well was plugged back to test various zones, with final plug back depth 3921' after squeezing off the last set of perforations 4016'-4024'. Since commercial production was not obtained, a valve was installed on the wellhead and Tohlacon Navajo No. 1 was temporarily abandoned December 30, 1958.

It is now proposed to permanently plug and abandon the well as follows:

1. Pump 100 sacks cement down 5-1/2"--13-3/8" casing annulus to anchor pipe (use 4% gel cement with 2% calcium chloride).
2. Remove wellhead and surface equipment (hole standing full of fluid).
3. Spot 5 sacks cement for surface plug (0-40') and erect dry hole marker.
4. Plug and abandonment by above procedure proposed to permit possible future re-entry in the event other zones are discovered to be productive in the area.

APACHE COUNTY, ARIZONA

9025

Pan American Petroleum Corporation

Toholacon Navajo No. 1

Sec. 11, T 40 N, R 25 E

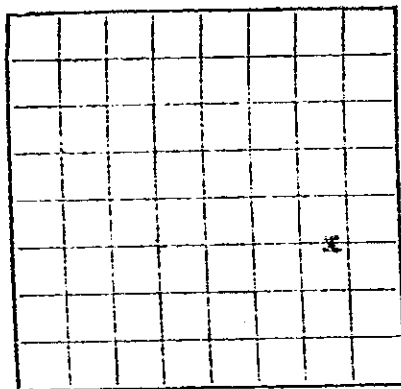
7-20-59: Received from R. S. Agatston, Atlantic, Durango, Colorado

7-21-59: LR to R. S. Agatston

4655-4660: 2 Fusulina, very poor - Lower Des Moines, nondescript

4805-4810: 1 Fusulina, good; 1 Wedekindellina, good - Lower Des
Moines, lower Cherokee types

Form 9-330



LOCATE WELL CORRECTLY

Budget Bureau No. 42-13354.
Approval expires 12-31-60.U. S. LAND OFFICE 2-Valle, Mich
SERIAL NUMBER 11-22-633-173
LEASE OR PERMIT TO PROSPECTUNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company Valle, Mich Address 2-Valle, Mich
 Lessor or Tract Valle, Mich Field Valle State Mich
 Well No. 1 Sec. 11 T. 13N R. 25E Meridian 11 County Valle
 Location 1500 ft. N of Line and 750 ft. E of Line of Section 11 Elevation 500
 (Denote gas by G)

The information given herewith is a complete and correct record of the well and all work done thereon
 so far as can be determined from all available records.
 Signed L. O. Spas, Jr.

Date 1-2-60 Title Driller

The summary on this page is for the condition of the well at above date.

Commenced drilling 1-2-60, 1960 Finished drilling 1-2-60, 1960

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from _____ to _____ No. 4, from _____ to _____
 No. 2, from _____ to _____ No. 5, from _____ to _____
 No. 3, from _____ to _____ No. 6, from _____ to _____

IMPORTANT WATER SANDS

No. 1, from _____ to _____ No. 3, from _____ to _____
 No. 2, from _____ to _____ No. 4, from _____ to _____

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated	Purpose
							From - To -	
1 1/2	25.0	11.5	AMERICAN	100	Standard	From 0 to 100		Drilling
1 1/2	25.0	11.5	AMERICAN	100	Standard	From 100 to 200		Drilling

HISTORY OF OIL OR GAS WELL

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
1 1/2	25.0	100	Standard	1.25	100
1 1/2	25.0	100	Standard	1.25	100

PLUGS AND ADAPTERS

Heaving plug—Material _____ Length _____ Depth set _____
 Adapters—Material _____ Size _____

SHOOTING RECORD

Size	Shot used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out

TOOLS USED

Rotary tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet
 Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

DATES

Completed as completing drilling well Put to producing _____, 1960
 The production for the first 24 hours was _____ barrels of fluid of which _____ % was oil; _____ %
 emulsion; _____ % water; and _____ % sediment. Gravity, °Bé. _____
 If gas well, cu. ft. per 24 hours _____ Gallons gasoline per 1,000 cu. ft. of gas _____
 Rock pressure, lbs. per sq. in. _____

EMPLOYEES

Driller _____ Driller _____
 Driller _____ Driller _____

FORMATION RECORD

J. J. York

Commenced drilling 19-57 Finished drilling 19-57

OIL OR GAS SANDS OR ZONES
(Denote gas by G)

No. 1, from to No. 4, from to

No. 2, from to No. 5, from to

No. 3, from to No. 6, from to

IMPORTANT WATER SANDS

No. 1, from _____ to _____ No. 3, from _____ to _____
No. 2, from _____ to _____ No. 4, from _____ to _____

CASING RECORD

[illegible]

HISTORY OF GIP OR GAS MEET

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
3-5/8	610	1000 sacks	Grout pump	1.25	
3-1/2	592	600 sacks	Grout pump	1.25	1000 - 1000 - 1000

PLUGS AND ADAPTERS

Heaving plug—Material	Length	Depth set
Adapters—Material	Size	

SHOOTING RECORD

[illegible]

TOOLS USED

Rotary tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

Cable tools were used from _____ feet to ~~5500~~ _____ feet, and from _____ feet to _____ feet

1 DATES

Completed as previously designed well	Put to producing	10
The production for the first 24 hours was	barrels of fluid of which	% was oil; %
emulsion; % water; and % sediment.	Gravity, °Bé.	
If gas well, cu. ft. per 24 hours	Gallons gasoline per 1,000 cu. ft. of gas	
Rock pressure, lbs. per sq. in.		

EMPLOYEES

		, Driller			, Driller
A. E. Tiers		, Driller		E. E. Martin	, Driller
Jerry Beall				E. L. Park	

FORMATION RECORD

FROM-	TO-	TOTAL FEET	FORMATION
0	1431	1431	Shallow sands and shales
1431	1604	173	Chert
1604	1848	244	Shale
1848	2356	508	Shale
2356	2877	1521	Shale
2877	4567	690	Shale
4567	5371	804	Shale
5371	5654	81	Shale
5654	5910	458	Shale (Lancaster)
5910	6469	199	Shale (Libert)
6469	6230	161	Shale
6230	6404	174	Shale
FROM-	TO-	TOTAL FEET	FORMATION

FORMATION RECORD—Continued

6524	6573	74	Pro-Catholics
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(See attachment for history for oil or gas well)

000089



89

CORING SUMMARY

Core #1 4822-4864' Cut 42', Rec 42' Core barrel jammed.

4822-24½ ls-lt gry, fossils (brachs), ls pellets, clean, tite
 4824½-25½ ls-scatt good vug. por. No cut or fluor
 25½-28 ls-ls pellets, fossil (brachs)
 28-30 ls-argill, sli fossil
 30-35 ls-fossil, cherty nod.
 35-36 ls-argill
 36-39 ls-argill, fossil (brachs)
 39-44 ls-sli fossil, ls pellets, blk sh partings
 44-46 ls-cherty, sli fossil
 46-48 ls-styolitic
 48-50 ls-nodular
 50-51 ls-dolomitic, sugary
 51-54 dolo-sugary, s/sdy, w/mica
 54-57 ls-argill
 57-59 ls-cherty
 59-64 ls-abdt chert nodules, styolitic

Core #2 4864-4896 Cut 32', Rec 32' Core barrel jammed.

4864-67 ls-chert nodules, fossils, styolites, NS
 67-70 ls-as above, NS
 70-73 ls-argill, fossils, NS
 73-76 ls-NS
 76-79 ls-v/sdy, fossils, NS
 79-81½ sh-silty, s/cals NS
 81½-84 sh-as above, NS
 84-87 ls-fossils, NS
 87-90 ls-scatt, P.P.-vug por. scatt stain & fluor, fracs, bldg oil from fracs
 90-93 ls-as above
 93-96 ls-as above, not as much porosity, stain, fluor, bldg oil

Core #3 4896-4946' Cut 50' Rec 50'

4896-4904 ls-argill, styolitic, chert, NS
 4904-11 ls-as above, w/very scatt & faint tr. P.P. por, bldg oil
 11-12 ls-as above
 12-26 ls-fossils, argill, NS
 26-32 sh-cherty, fossils, s/calc NS
 32-33 sh-silty NS
 33-39 ls-argill NS
 39-46 ls-argill, fracs, bldg oil, tr. porosity.

Core #4 4946-4962' Cut 16' Rec 14½' Core barrel jammed.

4946-54 ls-silty, P.P. vug. por. fracs, bldg oil from fracs and vugs.
 Bottom 3' appears to be water wet, but bldg small amt. gas.
 4954-60½ ls-fracs, tite, NS

Core #5 4962-5022 Cut and Rec 60'

4962-65½ ls-argill, NS
 65½-71 ls-fracs, styolitic & cherty
 71-75 dolo-fracs, fossils
 75-76 ls-dolo, fossils
 76-83 ls-dolo, fossils, cherty
 83-85 ls-s/dolo, fracs
 85-90 sh-s/dolo, s/fossil, silty
 90-91 dolo-fracs
 91-96 dolo-as above w/more fracs
 4996-5005 ls-s/silty & fossils, fracs
 5005-06 ls-as above
 06-20 sh-s/pokerchip
 20-22 dolo-s/silty, NS

Core #6 5102-5162' Cut & Rec 60'

5102-05 ls-sh strgra, NS
 05-06 dolo-tite, NS
 06-09 ls-sh inclus, w/very sli/bldg salt wtr.
 09-17 ls-sli P.P. porosity, fracs & carb material
 17-44 ls-fossils, sli P.P. porosity, fracs, styolitic

Core #6 (con't)

44-45 dolo-tite, NS
45-53 sh-banded, s/calco.
53-60 ls-sh inclus, fracs
60-62 ls-fracs, NS

Core #7 5162-5197' Cut 35', Rec 31½' barrel jam

5162-71 ls-fracs, fossils, stylitic, s/mica, NS
71-77 ls-interbedded w/dolo, NS
77-79 sh-w/ls inclus
79-90 ls-w/dolo, argill, NS
90-93½ ls-fracs, tr. P.P. porosity

Core #8 5505-5531 Cut 26' Rec 23' Core barrel jam.

5505-17 ls-tr red sh, fracs, tr yellow fluor, tite, NS
17-23 ls-patches of fair-good vuggy porosity
23-28 ls-sli cherty-stylitic, NS

Core #9 5531-41 Cut 10' Rec 9' Core barrel jammed.

5531-40 ls-sli oolitic & shly, NS

Core #10 5680-5713½ Cut & Rec 33½' barrel jammed.

5680-83 ls-sli dolo, fracs, stylitic, fossils, v/scatt tr. P.P.
porosity, sli stain, odor & fluor.
83-89 ls-sli fossil - tr. poor P.P. - vug porosity, fracs, sli stain & fluor.
5689-90 dolo-v/silic, NS
90-5704 ls-cherty, sh inclus, scatter fluor & stain, tr. solution cavities,
5704-07 dolo-silic, NS
07-08 ls-silic, NS
08-09 dolo-silic, stylitic, NS
09-10 ls-stylitic, cherty, fossils, fracs
10-11 dolo-silic, fracs, NS
11-13½ ls-silic, fracs, red sh inclus

Core #11 6239-6286 Cut & Rec 47' Core barrel jammed.

6239-86 dolo-stylitic, fracs, tr P. P. - vug porosity (6243-45, 6246-51,
6258-66) bldg live oil from vugs and fracs

Core #12 6286-6325 Cut 39' Rec 37' Core barrel jammed.

6286-91 dolo-shly, tr. fair P. P. - vug porosity, dead oil
91-94 dolo-shly, NS
94-97 dolo-as above
97-6301 dolo-v/shly, blk sh partings
6301-02 dolo-shly, stylitic, blk sh partings
02-09 dolo-v/shly, as above
09-11 dolo-as above
11-12 dolo-as above
12-13 dolo-tr. poor vug. porosity, dead oil stain
13-16 dolo-fracs, blk sh partings
16-19 dolo-as above - no fracs
19-23 dolo-abdt dead oil stain, v/faint sul. odor.

Attachment

HISTORY OF OIL OR GAS WELL - TOHLACON NAVAJO NO. 1

Tohlacon Navajo No. 1 was spudded September 10, 1958. On September 13, 1958, 13-3/8" casing was set at 886' in 17-1/4" hole with 1020 sacks of cement circulated to the surface. After waiting on cement 32 hours, casing and water shut-off were tested with 500 psi pressure for 30 minutes which held with no drop in pressure. Reduced hole to 12-1/4" at 886' and drilled to 2000'. Reduced hole to 8-3/4" at 2000'.

DRILL STEM TEST RECORD

- DST No. 1 3025-3123: Tool open 1-1/4 hours. Faint blow of air died in 15 minutes. Recovered 10' very slightly oil and gas cut mud. Initial 30-minute shut-in bottom hole pressure 70 psi, flowing bottom hole pressure 70 psi, final 30-minute shut-in bottom hole pressure 70 psi. Bottom hole temperature 108° F.
- DST No. 2 4027-4082: Tool open 1 hour. Weak blow of air immediately and died in 26 minutes. Recovered 20' drilling mud with no shows. Initial 45-minute shut-in bottom hole pressure 65 psi, flowing bottom hole pressure 45 psi, final 45-minute shut-in bottom hole pressure 45 psi.
- DST No. 3 4222-4340: Tool open 1 hour. Very weak blow of air immediately and died. Recovered 20' slightly gas cut mud. Initial 30-minute shut-in bottom hole pressure 67 psi, flowing bottom hole pressure 75 psi, final 45-minute shut-in bottom hole pressure 75 psi.
- DST No. 4 4336-4426: Tool open 1 hour. Very weak blow of air and died immediately. Recovered 15' drilling mud with no shows. Initial 30-minute shut-in bottom hole pressure 15 psi, flowing bottom hole pressure 15 psi, final 45-minute shut-in bottom hole pressure 15 psi. Bottom hole temperature 134° F.
- DST No. 5 4422-4560: Tool open 1 hour. Very weak blow of air and died immediately. Recovered 10' drilling mud with no shows. Initial 45-minute shut-in bottom hole pressure 30 psi, flowing bottom hole pressure 30 psi, final 45-minute shut-in bottom hole pressure 30 psi. Bottom hole temperature 128° F.
- DST No. 6 4558-4700: Tool open 1 hour. Very weak blow and died immediately. Recovered 10' drilling mud with no shows. Initial 45-minute shut-in bottom hole pressure 15 psi, flowing bottom hole pressure 15 psi, final 45-minute shut-in bottom hole pressure 15 psi. Bottom hole temperature 129° F.
- DST No. 7 4696-4796: Tool open 1 hour. No blow. Recovered 5' drilling mud with no shows. Initial 45-minute shut-in bottom hole pressure 15 psi, flowing bottom hole pressure 15 psi, final 45-minute shut-in bottom hole pressure 15 psi. Bottom hole temperature 132° F.
- DST No. 8 4795-4946: Tool open 3 hours. Weak blow of air immediately and throughout test. Recovered 90' gas cut mud and 25' free oil. Initial 45-minute shut-in bottom hole pressure 60 psi, flowing bottom hole pressure 45-60 psi, final 45-minute shut-in bottom hole pressure 245 psi. Bottom hole temperature 136° F.
- DST No. 9 4946-4962: Tool open 4 hours. Weak blow of air immediately and throughout test. Recovered 40' oil, 15' gas cut mud and 120' salt water. Initial 45-minute shut-in bottom hole pressure 70 psi, flowing bottom hole pressure 35-70 psi, final 45-minute shut-in bottom hole pressure 1365 psi.
- DST No. 10 4964-5102: Tool open 3 hours. Fair blow of air immediately decreasing to weak at end of test. Recovered 480' gas and water cut mud with rainbow of oil. Initial 45-minute shut-in bottom hole pressure 2525 psi, flowing bottom hole pressure 105-280 psi, final 45-minute shut-in bottom hole pressure 1745 psi. Bottom hole temperature 136° F.
- DST No. 11 5105-5197: Tool open 3-1/2 hours. Fair blow of air immediately and throughout test. Recovered 495' water and gas cut mud and 1000' salt water. Initial 45 minute shut-in bottom hole pressure 2505 psi, flowing bottom hole pressure 140-695 psi, final 45-minute shut-in bottom hole pressure 1580 psi. Bottom hole temperature 140° F.
- DST No. 12 5200-5300: Miscan.
- DST No. 13 5195-5300: Tool open 2 hours. Recovered 455' water cut mud and 1550' salt water. Initial 45-minute shut-in bottom hole pressure 2520 psi, flowing bottom hole pressure 175-935 psi, final 45-minute shut-in bottom hole pressure 1590 psi. Bottom hole temperature 142° F.
- DST No. 14 5295-5390: Tool open 1-1/2 hours. Very weak blow of air and died in 20 minutes. Recovered 30' drilling mud with no shows. Initial 45-minute shut-in bottom hole pressure 35 psi, flowing bottom hole pressure 35 psi, final 45-minute shut-in bottom hole pressure 35 psi.

DST No. 15 5460-5541: Tool open 4 hours. Weak blow of air immediately and throughout test. Recovered 350' very slightly water cut mud and 436' salt water cut mud with slight show of gas and light rainbow of oil. Initial 45-minute shut-in bottom hole pressure 2555 psi, flowing bottom hole pressure 105-385 psi, final 45-minute shut-in bottom hole pressure 1765 psi. Bottom hole temperature 143° F.

DST No. 16 5595-5713: Miarun.

DST No. 17 5583-5713: Tool open 3 hours. Recovered 336' slightly water cut mud, 180' water cut mud, and 180' salt water with no shows. Initial 30-minute shut-in bottom hole pressure 1990 psi, flowing bottom hole pressure 85-350 psi, final 30 minute shut-in bottom hole pressure 1750 psi.

DST No. 18 5736-5890: Tool open 3-1/2 hours. Strong blow of air immediately decreasing to very weak at end of test. Recovered 458' salt water cut mud and 3622' salt water. Initial 45-minute shut-in bottom hole pressure 1935 psi, flowing bottom hole pressure 225-1875 psi, final 45-minute shut-in bottom hole pressure 1905 psi. Bottom hole temperature 154° F.

DST No. 19 5923-6080: Miarun.

DST No. 20 5901-6080: Tool open 3 hours. Fair blow of air throughout test. Recovered 474' salt water cut mud with very slight show of gas and light rainbow of oil and 180' salt water. Initial 30-minute shut-in bottom hole pressure 2800 psi, flowing bottom hole pressure 110-365 psi, final 30-minute shut-in bottom hole pressure 2090 psi. Bottom hole temperature 155° F.

DST No. 21 6080-6225: Miarun.

DST No. 22 6070-6225: Tool open 3-1/2 hours. Good blow air immediately and throughout test. Recovered 1100' drilling mud with no shows and 2800' heavily salt water cut mud. Initial 30-minute shut-in bottom hole pressure 2900 psi, flowing bottom hole pressure 575-1825 psi, final 30-minute shut-in bottom hole pressure 2075 psi. Bottom hole temperature 152° F.

DST No. 23 6230-6286: Tool open 4 hours. Weak blow of air throughout test. Recovered 2' oil and 328' gas, oil, and water cut mud. Initial 45-minute shut-in bottom hole pressure 2075 psi, flowing bottom hole pressure 35-175 psi, final 45-minute shut-in bottom hole pressure 1800 psi.

DST No. 24 6266-6362: Tool open 3-1/2 hours. Good blow of air immediately and throughout test. Recovered 170' gas and salt water cut mud and 2635' salt water. Initial 45-minute shut-in bottom hole pressure 2145 psi, flowing bottom hole pressure 105-1295 psi, final 30-minute shut-in bottom hole pressure 2110 psi. Bottom hole temperature 163° F.

DST No. 25 6430-6508: Tool open 4 hours. Good blow of air throughout test. Recovered 1440' slightly salt water cut mud and 290' heavily salt water cut mud with no shows. Initial 45-minute shut-in bottom hole pressure 3040 psi, flowing bottom hole pressure 455-870 psi, final 30-minute shut-in bottom hole pressure 1835 psi. Bottom hole temperature 156° F.

On December 6, 1958, at total depth 6598', 5-1/2" casing was set at 6595' with a stage tool at 5627'. First stage cemented with 275 sacks 6% gel cement with 1-1/2 lbs. Tufflug per sack followed by 50 sacks neat cement. After 4 hours, second stage cemented with 325 sacks 6% gel cement with 1-1/2 lbs. Tufflug per sack and tool closed with 1700 psi. Found top of cement behind 5-1/2" casing at 3528' by temperature survey. After waiting on cement 48 hours, casing and water shut-off were tested with 1100 psi for 30 minutes which held with no drop in pressure.

STIMULATION AND TESTING RECORD

On December 9, 1958, completion and testing operations were initiated on Tehlacon Navajo No. 1 with the following results:

1. Perforated 4 SPF 6230-6253. Set packer at 6182 and acidized with 500 gallons mud cleanout agent. Breakdown pressure 2300 psi, treating pressure 1600 psi, injection rate 2.6 barrels per minute. Zone failed to flow. Swabbed 38 barrels lead and acid water and 42 barrels salt water with very slight show dead black oil in 15 hours. No gas. Swabbed additional 23 barrels of salt water in 15 hours. Reset packer at 6130 and squeezed perforations with 100 sacks of cement to maximum pressure of 4400 psi.

2. Perforated 4 SPF 5489-5528. Set packer at 5467 and acidized with 500 gallons of mud acid. Breakdown pressure 2600 psi, treating pressure 1500 psi, injection rate 3 barrels per minute. Swabbed 21 barrels lead water and 12 barrels acid water in 24

hours and snubbed 6 barrels salt water and 5 barrels oil in 6 hours with fluid level at 5000'. Reacidized with 2000 gallons 15% regular acid. Treating pressure 1200 psi and injection rate 3 barrels per minute. Snubbed 21 barrels lead water and 37 barrels acid water in 14-1/2 hours. Snubbed 32 barrels heavy black oil and 19 barrels salt water in 19 hours. No gas. Snubbed 8 barrels of fluid in 4 hours and sons went to 90% water. Set drillable bridge plug above perforations at 5450'.

3. Perforated 2 SPF 5294-5332. Set packer at 5281 and acidized with 500 gallons mud acid. Breakdown pressure 2800 psi, treating pressure 1600 psi, injection rate 2 barrels per minute. Snubbed 22 barrels lead water, 12 barrels acid water, and 40 barrels salt water in 25 hours with no shows. Reset packer at 5248 and squeezed perforations with 100 sacks of cement to maximum pressure of 4400 psi.

4. Perforated 4 SPF 5194-5216. Set packer at 5186 and acidized with 500 gallons mud acid. Breakdown pressure 1800 psi, treating pressure 1300 psi, injection rate 3 barrels per minute. Snubbed 32 barrels lead and acid water and 122 barrels salt water in 24 hours with no shows. Reset packer at 5090 and squeezed perforations with 150 sacks of cement to maximum pressure of 4500 psi.

5. Perforated 4 SPF 4943-4960. Set packer at 4901 and acidized with 500 gallons mud acid. Breakdown pressure 2200 psi, treating pressure 1300 psi, injection rate 3 barrels per minute. Snubbed 11 barrels lead and acid water, 33 barrels salt water, and 12 barrels of oil in 50 hours. Reacidized with 2000 gallons 15% regular acid. Treating pressure 1300 psi and injection rate 3 barrels per minute. Snubbed 68 barrels lead and acid water, 72 barrels salt water, and 12 barrels oil in 15 hours. Reset packer at 4920 and squeezed perforations with 200 sacks of cement to maximum pressure of 4500 psi.

6. Perforated 4 SPF 4826-4836, 4866-4874, and 4890-4896. Set packer at 4816 and acidized three sets of perforations with 2500 gallons 15% regular acid. Breakdown pressure 2000 psi, treating pressure 2100 psi, injection rate 2 barrels per minute. Tested all three zones and snubbed 46 barrels lead and acid water with slight trace of oil in last 30 barrels in 37 hours and snubbed dry still lacking recovery of 32 barrels acid water. Reset packer at 4722 and squeezed perforations with 200 sacks of cement to maximum pressure of 4500 psi.

7. Perforated 4 SPF 4016-4024. Set packer at 3988 and acidized with 1000 gallons mud acid. Breakdown pressure 3000 psi, treating pressure 1200 psi, injection rate 3 barrels per minute. Snubbed 16 barrels lead water and 8 barrels acid water in 11 hours and snubbed dry with no shows of oil or gas. Reset packer at 3896 and squeezed perforations with 100 sacks of cement to maximum pressure of 4400 psi. Tagged up top of cement at 3921.

Since commercial production was not obtained, a valve was installed on the wellhead and the Tehlacon Navajo No. 1 was temporarily abandoned December 30, 1958.

CORING SUMMARY

Core #1 4822-4864' Cut 42', Rec 42' Core barrel jammed.

4822-24½	ls-lt gry, fossils (brachs), ls pellets, clean, tite
4824½-25½	ls-scatt good vug. por. No cut or fluor
25½-28	ls-ls pellets, fossil (brachs)
28-30	ls-argill, ali fossil
30-35	ls-fossil, cherty nod.
35-36	ls-argill
36-39	ls-argill, fossil (brachs)
39-44	ls-sli fossil, ls pellets, blk sh partings
44-46	ls-cherty, ali fossil
46-48	ls-styolitic
48-50	ls-nodular
50-51	ls-dolomitic, sugary
51-54	dolo-sugary, s/sdy, w/mica
54-57	ls-argill
57-59	ls-cherty
59-64	ls-abdt chert nodules, styolitic

Core #2 4864-4896 Cut 32', Rec 32' Core barrel jammed.

4864-67	ls-chert nodules, fossils, styolites, NS
67-70	ls-as above, NS
70-73	ls-argill, fossils, NS
73-76	ls-NS
76-79	ls-v/sdy, fossils, NS
79-81½	sh-silty, s/cals NS
81½-84	sh-as above, NS
84-87	ls-fossils, NS
87-90	ls-scatt, P.P.-vug por. scatt stain & fluor, fracs, bldg oil from fracs
90-93	ls-as above
93-96	ls-as above, not as much porosity, stain, fluor, bldg oil

Core #3 4896-4946' Cut 50' Rec 50'

4896-4904	ls-argill, styolitic, chert, NS
4904-11	ls-as above, w/very scatt & faint tr. P.P. por, bldg oil
11-12	ls-as above
12-26	ls-fossils, argill, NS
26-32	sh-cherty, fossils, s/calc NS
32-33	sh-silty NS
33-39	ls-argill NS
39-46	ls-argill, fracs, bldg oil, tr. porosity.

Core #4 4946-4962' Cut 16' Rec 14½' Core barrel jammed.

4946-54	ls-silty, P.P. vug. por. fracs, bldg oil from fracs and vugs. Bottom 3' appears to be water wet, but bldg small amt. gas.
4954-60½	ls-fracs, tite, NS

Core #5 4962-5022 Cut and Rec 60'

4962-65½	ls-argill, NS
65½-71	ls-fracs, styolitic & cherty
71-75	dolo-fracs, fossils
75-76	ls-dolo, fossils
76-83	ls-dolo, fossils, cherty
83-85	ls-s/dolo, fracs
85-90	sh-s/dolo, s/fossil, silty
90-91	dolo-fracs
91-96	dolo-as above w/more fracs
4996-5005	ls-s/silty & fossils, fracs
5005-06	ls-as above
06-20	sh-s/pokerchip
20-22	dolo-s/silty, NS

Core #6 5102-5162' Cut & Rec 60'

5102-05	ls-sh strgrs, NS
05-06	dolo-tite, NS
06-09	ls-sh inclus, w/very sli/bldg salt wtr.
09-17	ls-sli P.P. porosity, fracs & carb material
17-44	ls-fossils, sli P.P. porosity, fracs, styolitic

Core #6 (con't)

44-45 dolo-tite, NS
45-53 sh-banded, s/calc.
53-60 ls-sh inclus, fracs
60-62 ls-fracs, NS

Core #7 5162-5197' Cut 35', Rec 31½' barrel jam

5162-71 ls-fracs, fossils, stvolutic, s/mica, NS
71-77 ls-interbedded w/dolo, NS
77-79 sh-w/ls inclus
79-90 ls-w/dolo, argill, NS
90-93½ ls-fracs, tr. P.P. porosity

Core #8 5505-5531 Cut 26' Rec 23' Core barrel jam.

5505-17 ls-tr red sh, fracs, tr yellow fluor, tite, NS
17-23 ls-patches of fair-good vuggy porosity
23-28 ls-sli cherty-stvolutic, NS

Core #9 5531-41 Cut 10' Rec 9' Core barrel jammed.

5531-40 ls-sli oolitic & shly, NS

Core #10 5680-5713½ Cut & Rec 33½' barrel jammed.

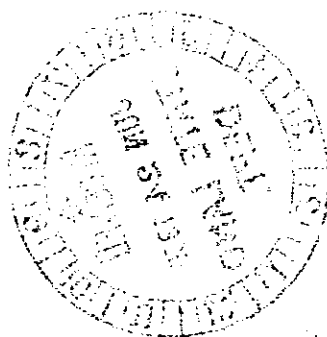
5680-83 ls-sli dolo, fracs, stvolutic, fossils, v/scatt tr. P.P.
porosity, sli stain, odor & fluor.
83-89 ls-sli fossil - tr. poor P.P. - vug porosity, fracs, sli stain & fluor.
5689-90 dolo-v/silic, NS
90-570½ ls-cherty, sh inclus, scatter fluor & stain, tr. solution cavities,
570½-07 dolo-silic, NS
07-08 ls-silic, NS
08-09 dolo-silic, stvolutic, NS
09-10 ls-stvolutic, cherty, fossils, fracs
10-11 dolo-silic, fracs, NS
11-13½ ls-silic, fracs, red sh inclus

Core #11 6239-6286 Cut & Rec 47' Core barrel jammed.

6239-86 dolo-stvolutic, fracs, tr P. P. - vug porosity (6243-45, 6246-51,
6258-66) bldg live oil from vugs and fracs

Core #12 6286-6325 Cut 39' Rec 37' Core barrel jammed.

6286-91 dolo-shly, tr. fair P. P. - vug porosity, dead oil
91-94 dolo-shly, NS
94-97 dolo-as above
97-6301 dolo-v/shly, blk sh partings
6301-02 dolo-shly, stvolutic, blk sh partings
02-09 dolo-v/shly, as above
09-11 dolo-as above
11-12 dolo-as above
12-13 dolo-tr. poor vug. porosity, dead oil stain
13-16 dolo-fracs, blk sh partings
16-19 dolo-as above - no fracs
19-23 dolo-abdt dead oil stain, v/faint sul. odor.



Attachment

HISTORY OF OIL OR GAS WELL - TOHLACON NAVAJO NO. 1

Tohlaccon Navajo No. 1 was spudded September 10, 1958. On September 13, 1958, 13-3/8" casing was set at 886' in 17-1/4" hole with 1020 sacks of cement circulated to the surface. After waiting on cement 32 hours, casing and water shut-off were tested with 500 psi pressure for 30 minutes which held with no drop in pressure. Reduced hole to 12-1/4" at 888' and drilled to 2000'. Reduced hole to 8-9/16" at 2000'.

DRILL STEM TEST RECORD

- DST No. 1 3025-3123: Tool open 1-1/4 hours. Faint blow of air died in 15 minutes. Recovered 10' very slightly oil and gas cut mud. Initial 30-minute shut-in bottom hole pressure 70 psi, flowing bottom hole pressure 70 psi, final 30-minute shut-in bottom hole pressure 70 psi. Bottom hole temperature 108° F.
- DST No. 2 4027-4032: Tool open 1 hour. Weak blow of air immediately and died in 26 minutes. Recovered 20' drilling mud with no shows. Initial 45-minute shut-in bottom hole pressure 65 psi, flowing bottom hole pressure 45 psi, final 45-minute shut-in bottom hole pressure 45 psi.
- DST No. 3 4222-4340: Tool open 1 hour. Very weak blow of air immediately and died. Recovered 20' slightly gas cut mud. Initial 30-minute shut-in bottom hole pressure 67 psi, flowing bottom hole pressure 75 psi, final 45-minute shut-in bottom hole pressure 75 psi.
- DST No. 4 4336-4426: Tool open 1 hour. Very weak blow of air and died immediately. Recovered 15' drilling mud with no shows. Initial 30-minute shut-in bottom hole pressure 15 psi, flowing bottom hole pressure 15 psi, final 45-minute shut-in bottom hole pressure 15 psi. Bottom hole temperature 134° F.
- DST No. 5 4422-4560: Tool open 1 hour. Very weak blow of air and died immediately. Recovered 10' drilling mud with no shows. Initial 45-minute shut-in bottom hole pressure 30 psi, flowing bottom hole pressure 30 psi, final 45-minute shut-in bottom hole pressure 30 psi. Bottom hole temperature 128° F.
- DST No. 6 4558-4700: Tool open 1 hour. Very weak blow and died immediately. Recovered 10' drilling mud with no shows. Initial 45-minute shut-in bottom hole pressure 15 psi, flowing bottom hole pressure 15 psi, final 45-minute shut-in bottom hole pressure 15 psi. Bottom hole temperature 129° F.
- DST No. 7 4696-4796: Tool open 1 hour. No blow. Recovered 5' drilling mud with no shows. Initial 45-minute shut-in bottom hole pressure 15 psi, flowing bottom hole pressure 15 psi, final 45-minute shut-in bottom hole pressure 15 psi. Bottom hole temperature 132° F.
- DST No. 8 4795-4946: Tool open 3 hours. Weak blow of air immediately and throughout test. Recovered 90' gas cut mud and 25' free oil. Initial 45-minute shut-in bottom hole pressure 60 psi, flowing bottom hole pressure 45-60 psi, final 45-minute shut-in bottom hole pressure 245 psi. Bottom hole temperature 136° F.
- DST No. 9 4946-4962: Tool open 4 hours. Weak blow of air immediately and throughout test. Recovered 40' oil, 15' gas cut mud and 120' salt water. Initial 45-minute shut-in bottom hole pressure 70 psi, flowing bottom hole pressure 35-70 psi, final 45-minute shut-in bottom hole pressure 1365 psi.
- DST No. 10 4964-5100: Tool open 3 hours. Fair blow of air immediately decreasing to weak at end of test. Recovered 480' gas and water cut mud with rainbow of oil. Initial 45-minute shut-in bottom hole pressure 2525 psi, flowing bottom hole pressure 105-280 psi, final 45-minute shut-in bottom hole pressure 1745 psi. Bottom hole temperature 138° F.
- DST No. 11 5105-5197: Tool open 3-1/2 hours. Fair blow of air immediately and throughout test. Recovered 495' water and gas cut mud and 1000' salt water. Initial 45 minute shut-in bottom hole pressure 2505 psi, flowing bottom hole pressure 140-695 psi, final 45-minute shut-in bottom hole pressure 1580 psi. Bottom hole temperature 140° F.
- DST No. 12 5200-5300: Miscal.
- DST No. 13 5135-5300: Tool open 2 hours. Recovered 455' water cut mud and 1550' salt water. Initial 45-minute shut-in bottom hole pressure 2520 psi, flowing bottom hole pressure 175-995 psi, final 45-minute shut-in bottom hole pressure 1590 psi. Bottom hole temperature 142° F.
- DST No. 14 5295-5390: Tool open 1-1/2 hours. Very weak blow of air and died in 20 minutes. Recovered 30' drilling mud with no shows. Initial 45-minute shut-in bottom hole pressure 35 psi, flowing bottom hole pressure 35 psi, final 45-minute shut-in bottom hole pressure 35 psi.

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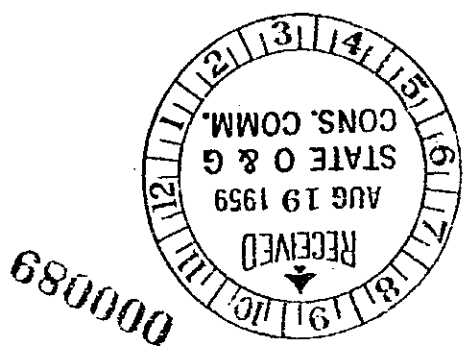
- DST No. 15 5460-5541: Tool open 4 hours. Weak blow of air immediately and throughout test. Recovered 350' very slightly water cut mud and 436' salt water cut mud with slight show of gas and light rainbow of oil. Initial 45-minute shut-in bottom hole pressure 2555 psi, flowing bottom hole pressure 105-385 psi, final 45-minute shut-in bottom hole pressure 1765 psi. Bottom hole temperature 143° F.
- DST No. 16 5595-5713: Miarun.
- DST No. 17 5583-5713: Tool open 3 hours. Recovered 336' slightly water cut mud, 180' water cut mud, and 180' salt water with no shows. Initial 30-minute shut-in bottom hole pressure 1990 psi, flowing bottom hole pressure 85-350 psi, final 30 minute shut-in bottom hole pressure 1750 psi.
- DST No. 18 5736-5890: Tool open 3-1/2 hours. Strong blow of air immediately decreasing to very weak at end of test. Recovered 438' salt water cut mud and 3622' salt water. Initial 45-minute shut-in bottom hole pressure 1935 psi, flowing bottom hole pressure 225-1875 psi, final 45-minute shut-in bottom hole pressure 1905 psi. Bottom hole temperature 154° F.
- DST No. 19 5923-6010: Miarun.
- DST No. 20 5901-6010: Tool open 3 hours. Fair blow of air throughout test. Recovered 474' salt water cut mud with very slight show of gas and light rainbow of oil and 180' salt water. Initial 30-minute shut-in bottom hole pressure 2800 psi, flowing bottom hole pressure 110-365 psi, final 30-minute shut-in bottom hole pressure 2090 psi. Bottom hole temperature 155° F.
- DST No. 21 6080-6225: Miarun.
- DST No. 22 6070-6225: Tool open 3-1/2 hours. Good blow air immediately and throughout test. Recovered 1100' drilling mud with no shows and 2800' heavily salt water cut mud. Initial 30-minute shut-in bottom hole pressure 2900 psi, flowing bottom hole pressure 575-1825 psi, final 30-minute shut-in bottom hole pressure 2075 psi. Bottom hole temperature 152° F.
- DST No. 23 6230-6286: Tool open 4 hours. Weak blow of air throughout test. Recovered 2' oil and 328' gas, oil, and water cut mud. Initial 45-minute shut-in bottom hole pressure 2075 psi, flowing bottom hole pressure 35-175 psi, final 45-minute shut-in bottom hole pressure 1800 psi.
- DST No. 24 6286-6362: Tool open 3-1/2 hours. Good blow of air immediately and throughout test. Recovered 170' gas and salt water cut mud and 2625' salt water. Initial 45-minute shut-in bottom hole pressure 2145 psi, flowing bottom hole pressure 105-1295 psi, final 30-minute shut-in bottom hole pressure 2110 psi. Bottom hole temperature 163° F.
- DST No. 25 6430-6508: Tool open 4 hours. Good blow of air throughout test. Recovered 1440' slightly salt water cut mud and 290' heavily salt water cut mud with no shows. Initial 45-minute shut-in bottom hole pressure 3040 psi, flowing bottom hole pressure 455-870 psi, final 30-minute shut-in bottom hole pressure 1835 psi. Bottom hole temperature 156° F.

On December 6, 1958, at total depth 6598', 5-1/2" casing was set at 6595' with a stage tool at 5627'. First stage cemented with 275 sacks 6% gel cement with 1-1/2 lbs. Tufflug per sack followed by 50 sacks neat cement. After 4 hours, second stage cemented with 125 sacks 6% gel cement with 1-1/2 lbs. Tufflug per sack and tool closed with 1700 psi. Found top of cement behind 5-1/2" casing at 3520' by temperature survey. After waiting on cement 48 hours, casing and water shut-off were tested with 1100 psi for 30 minutes which held with no drop in pressure.

STIMULATION AND TESTING RECORD

On December 9, 1958, completion and testing operations were initiated on Tahlacon Navajo No. 1 with the following results:

1. Perforated 4 SPF 6230-6253. Set packer at 6182 and acidized with 500 gallons mud cleanout agent. Breakdown pressure 2300 psi, treating pressure 1600 psi, injection rate 2.6 barrels per minute. Zone failed to flow. Swabbed 38 barrels load and acid water and 42 barrels salt water with very slight show dead black oil in 15 hours. No gas. Swabbed additional 23 barrels of salt water in 15 hours. Reset packer at 6130 and squeezed perforations with 100 sacks of cement to maximum pressure of 4400 psi.
2. Perforated 4 SPF 5489-5528. Set packer at 5467 and acidized with 500 gallons of mud acid. Breakdown pressure 2600 psi, treating pressure 1500 psi, injection rate 3 barrels per minute. Swabbed 21 barrels load water and 12 barrels acid water in 24



hours and swabbed 6 barrels salt water and 5 barrels oil in 6 hours with fluid level at 5000'. Reacidized with 2000 gallons 15% regular acid. Treating pressure 1200 psi and injection rate 3 barrels per minute. Swabbed 21 barrels lead water and 37 barrels acid water in 14-1/2 hours. Swabbed 32 barrels heavy black oil and 19 barrels salt water in 19 hours. No gas. Swabbed 8 barrels of fluid in 4 hours and cone went to 90' water. Set drillable bridge plug above perforations at 5450'.

3. Perforated 2 SPF 5296-5332. Set packer at 5281 and acidized with 500 gallons mud acid. Breakdown pressure 2800 psi, treating pressure 1600 psi, injection rate 2 barrels per minute. Swabbed 22 barrels lead water, 12 barrels acid water, and 40 barrels salt water in 25 hours with no shows. Reset packer at 5248 and squeezed perforations with 100 sacks of cement to maximum pressure of 4400 psi.

4. Perforated 4 SPF 5194-5216. Set packer at 5186 and acidized with 500 gallons mud acid. Breakdown pressure 1800 psi, treating pressure 1300 psi, injection rate 3 barrels per minute. Swabbed 32 barrels lead and acid water and 122 barrels salt water in 24 hours with no shows. Reset packer at 5090 and squeezed perforations with 150 sacks of cement to maximum pressure of 4500 psi.

5. Perforated 4 SPF 4942-4960. Set packer at 4961 and acidized with 500 gallons mud acid. Breakdown pressure 2200 psi, treating pressure 1300 psi, injection rate 3 barrels per minute. Swabbed 31 barrels lead and acid water, 33 barrels salt water, and 12 barrels of oil in 50 hours. Reacidized with 2000 gallons 15% regular acid. Treating pressure 1300 psi and injection rate 3 barrels per minute. Swabbed 68 barrels lead and acid water, 72 barrels salt water, and 12 barrels oil in 15 hours. Reset packer at 4920 and squeezed perforations with 200 sacks of cement to maximum pressure of 4500 psi.

6. Perforated 4 SPF 4826-4836, 4866-4874, and 4890-4896. Set packer at 4816 and acidized three sets of perforations with 2500 gallons 15% regular acid. Breakdown pressure 2000 psi, treating pressure 2100 psi, injection rate 2 barrels per minute. Tested all three zones and swabbed 46 barrels lead and acid water with slight trace of oil in last 30 barrels in 37 hours and swabbed dry still lacking recovery of 32 barrels acid water. Reset packer at 4722 and squeezed perforations with 200 sacks of cement to maximum pressure of 4500 psi.

7. Perforated 4 SPF 4016-4024. Set packer at 3988 and acidized with 1000 gallons mud acid. Breakdown pressure 3000 psi, treating pressure 1200 psi, injection rate 3 barrels per minute. Swabbed 16 barrels lead water and 8 barrels acid water in 11 hours and swabbed dry with no shows of oil or gas. Reset packer at 3896 and squeezed perforations with 100 sacks of cement to maximum pressure of 4400 psi. Tagged up top of cement at 3921.

Since commercial production was not obtained, a valve was installed on the wellhead and the Toblacon Navajo No. 1 was temporarily abandoned December 30, 1958.

1

1

#89



STATE LAND DEPARTMENT
STATE OF ARIZONA

Form OG 51

Form Prescribed Under Oil and Gas Conservation Act of 1951

NOTICE OF INTENTION TO DRILL NEW WELL

This notice and surety bond must be filed and permit
must be granted before drilling begins

State Land Commissioner Phoenix Ariz. August 20 1958

In compliance with Statewide Rule 3, notice is hereby given that it is
our intention to commence the work of drilling well No. 1 Sec. 11,

Twp. 40-N, Rge. 25-E B. & M., Wildcat Field,
Apache County. Tohlacon Navajo Well No. 1

Legal description of lease NE/4 SE/4 of Section 11, T-40-N, R-25-E, plat attached.
(attach map or plat to scale)

Location of Well: 1980 feet from south line, 760 feet from east line, Section 11, T-40-N,
(Give exact footage from section corners or other

R-25-E
legal subdivisions or streets)

Proposed drilling depth 6300 feet/ (basement) Acres in drilling unit 40

Has surety bond been filed? yes. Is location a regular or exception to
spacing rule? regular.

Elevation of ground above sea level 5297 feet. To be reported later

All depth measurements taken from top of rotary drive bushing
(Derrick, floor, Rotary Table or

which is * 12 feet above the ground.
(Kelly Bushing) *To be reported later.

PROPOSED CASING PROGRAM

Size of Casing	Inches A.P.I.	Weight	Grade & Type	Top	Bottom	Cementing Depths
500'	13-3/8"	48#	H-40 ST&C	X	X	500'
2020'	9-5/8"	(See reverse side for breakdown.)				2000'
6300'	5-1/2"	14#	J-55 ST&C	X	X	6300'

Intended Zone or Zones of completion:

Name Perforated Interval
Wildcat well - zone of completion not known - will be reported in subsequent reports.

AFFIDAVIT:

I hereby certify under the penalty of perjury, that the information
contained and statements herein made are to the best of my knowledge and
belief, true, correct and complete. PAN AMERICAN PETROLEUM CORPORATION

(Applicant) P.O. Box 487, Farmington, New Mexico

By L.O. Perry Field Superintendent

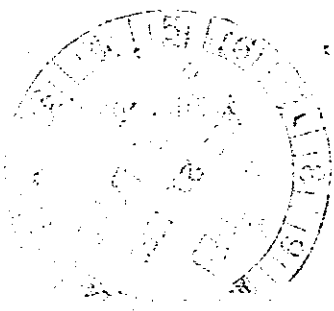
Application approved this 28th day of August 19 58

Permit No. 60
3-62 1/10/58

Obed M. Lamm
State Land Commissioner

Size of Casing		Weight	Grade & Type	Top	Bottom	Cementing Depths
Inches	A.P.I.					
400'	9-5/8"	36#	8RT J-55	X		
1322'	9-5/8"	32.3#	8RT H-40			
59'	9-5/8"	36#	H-40 8RT ST&C			
239'	9-5/8"	36#	J-55 8RT ST&C		X	

If required due to hole conditions.



COMPANY Pan American Petroleum Corporation

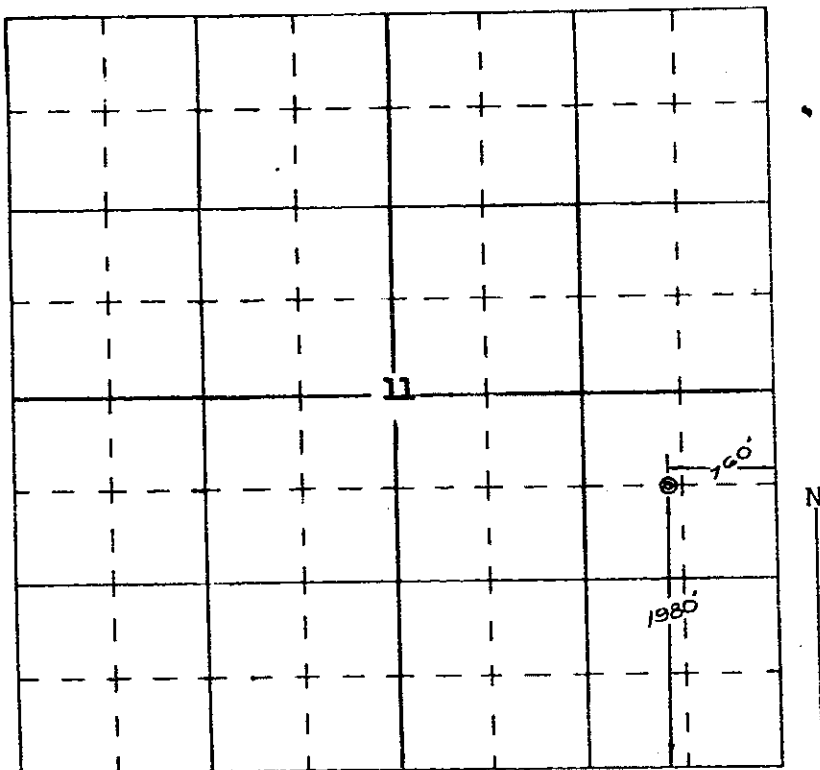
Well Name & No. Toblacon Navajo No. 1 Lease No. 1420-603-4178

Location 1980' from the South line and 760' from the East line.

Being in NE 1/4 SE 1/4

Sec. 11, T. 40 N., R. 25 E., Gila and Salt River Meridian, Apache County, Arizona.

Ground Elevation



Scale -- 4 inches equals 1 mile

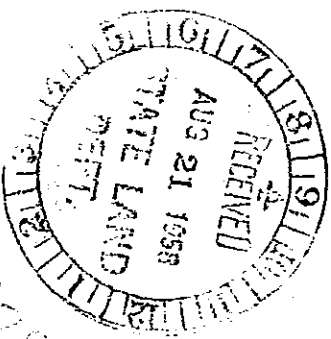
Surveyed August 19, 19 58

This is to certify that the above plat was prepared from field notes of actual surveys made by me or under my supervision and that the same are true and correct to the best of my knowledge and belief.



Ernest V. Echohawk

Ernest V. Echohawk
Registered Land Surveyor
N. M. Reg. #1545
Arizona Reg. No. 2311



Oil and Gas Conservation Commission

STATE OF ARIZONA

DEPARTMENT OF REVENUE

Phoenix, Arizona 85007

REG. NO. 1-10101

October 7, 1970

Seaboard Surety Company
A 1320 - 175 West Jackson Boulevard
Chicago, Illinois 60604

Attention: Mr. R. J. Byrnes

Re: Seaboard Surety Company Bond No. 571757 - \$25,000
Pan American Petroleum Corporation

Gentlemen:

Records of this office indicate that on October 7, 1970, Pan American Petroleum Company fulfilled their obligations to the State of Arizona as to the requirements pertaining to the captioned well. We authorize termination of the subject bond effective this date.

Very truly yours,

W. E. Allen
Director, Enforcement Section

WEA:jd

cc: Pan American Petroleum Company

September 15, 1970

Mr. T. M. Curtis
Pan American Petroleum Corporation
Security Life Building
Denver, Colorado 80202

Re: Blanket Drilling Bond
No. 672765

Pan American #1 Navajo "O"
SE/4 NW/4 Sec. 23-T41N-R30E
Apache County
Our File #232
Recently purchased by Clinton Oil Company

Dear Mr. Curtis:

In reply to your letter of September 10, 1970, requesting release of liability under the above referenced bond, we have this date notified Clinton Oil Company to furnish this Commission with their own bond covering their Arizona operations.

According to the terms as outlined in your Designation of Operator, it was stipulated that Pan American would retain the responsibility of the lessee; therefore, it was our understanding that Clinton would not be liable for the bonding responsibility.

As quickly as we receive an approved bond from Clinton, we will take the necessary measures to release Pan American from any further liability. We hope that this delay will cause no undo inconvenience.

Very truly yours,

W. E. Allen
Director, Enforcement Section

WEA:jg

September 14, 1970

Mr. M. C. Lyons
Accounting Department
Clinton Oil Company
217 North Water Street
Wichita, Kansas 67202

Re: Pan American #1 Navajo "O"
31/4 SW/4 Sec. 23-T41N-R3 E
Apache County
Our File #232

Dear Mr. Lyons:

Please refer to our letter to you dated July 7, 1970, and your reply of July 17, 1970. We now have received from Pan American Petroleum Corporation a request to cancel their blanket bond No. 672765 presently covering your operations. A copy of their letter is enclosed.

This Commission cannot grant Pan American's request until such time as Clinton Oil Company furnishes us with a replacement bond signed by an Arizona Surety Agent. As you know, a bond on an individual well must be in the amount of \$5,000. A blanket bond in the amount of \$25,000 will cover your present operation and any future anticipated operations within this State.

We regret if we have caused you or your company any inconvenience as regards this bonding situation; however, it was our initial understanding that Pan American would keep their bond in full force and effect.

Should you need additional information, please let us know.

Very truly yours,

W. E. Allen
Director, Enforcement Section

WEA:j4
Enc.

PAN AMERICAN PETROLEUM CORPORATION

EXECUTING DEPARTMENT
H. T. HENDERSON
DISTRICT PRODUCTION
MANAGER

SECURITY LIFE BUILDING
DENVER, COLORADO 80202

DISTRICT SUPERINTENDENT
W. M. JONES
T. M. CURTIS

September 10, 1970

File: TMC-269-923

Re: Blanket Drilling
Bond No. 672765

*Bill
check & advise*

Mr. John Bannister
Executive Secretary
Oil & Gas Conservation Commission
1624 West Adams - Room 202
Phoenix, Arizona 85007

Dear Sir:

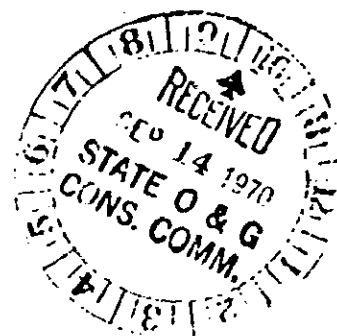
Pan American Petroleum Corporation no longer has any producing property in the State of Arizona.

Our \$25,000 Blanket Drilling Bond No. 672765 is no longer needed. Please furnish us a release of liability under the bond in order for us to cancel our coverage with our surety.

Yours very truly,

T. M. Curtis

cc: Mr. R. B. Parson - Tulsa
Mr. L. O. Speer, Jr. - Fmgtm



Operator PAN AMERICAN PETROLEUM CORP

Bond Company Seaboard Surety Co. Amount 25,000

Bond No. not shown Date Approved 11-8-65

Permits covered by this bond:

- 60
- 76
- 85
- 98
- 176
- 179
- 232
- 247
- 280
- 422
- 428

CANCELLED
LIT 11-6-72

see original
bond in
file
232.

Bond No. 522932 C/S Date Approved 8-28-58

Permits covered by this bond:

see this file

85✓

176✓

179✓

232✓

76✓

98✓

60✓

280

247✓

252-871

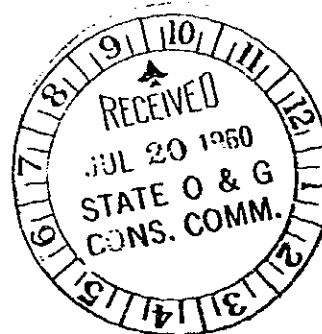
252-8711

PAN AMERICAN PETROLEUM CORPORATION

P. O. Box 480, Farmington, New Mexico
July 19, 1960

File: H-772-980.3

Subject: Arizona Forms



Arizona Oil and Gas Conservation Commission
Suite 312
3500 N. Central Avenue
Phoenix, Arizona

Gentlemen:

Please forward the following Arizona forms to Mr. L. O. Speer, Jr., Pan American Petroleum Corporation, P. O. Box 480, Farmington, New Mexico:

- 50 ea. P-1 Application for Permit to Drill, Deepen or Plug Back
- 50 ea. P-7 Well Completion or Recompletion Report and Well Log
- 50 ea. P-15 Plugging Record
- 50 ea. P-15A Notice of Intention to Plug and Abandon
- 50 ea. P-19 Certificate for Load Oil Credit and Permit to Transport Recovered Load Oil

Yours very truly,

PAN AMERICAN PETROLEUM CORPORATION

L. O. Speer, Jr.
L. O. Speer, Jr.
Area Superintendent

LJL:ep

July 22, 1960

Pan American Petroleum Corp.
P. O. Box 480
Farmington, New Mexico

Attention: Mr. L. O. Speer, Jr.
Area Superintendent

Dear Mr. Speer:

Enclosed are the forms you requested in your letter of July 19, 1960. Since we are in rather short supply, we are sending 25 of each, rather than the 50 which you originally specified. Please note that these forms are prefixed with OG rather than P, due to the fact that these are to be used in accordance with the 1951-52 Rules, and the P forms were used under the 1952 Rules, which at present are not in effect.

Yours very truly,

D. A. Jerome
Executive Secretary

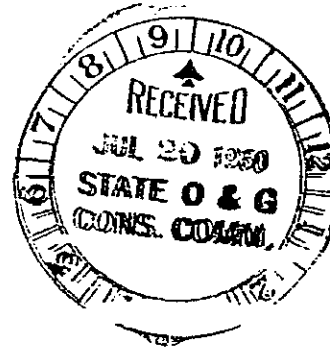
EW
Enclosures -25OG-51
25/OG-52
25/OG-55
25/OG-56
25/OG-57

PAN AMERICAN PETROLEUM CORPORATION

P. O. Box 480, Farmington, New Mexico
July 18, 1960

File: E-445-409

Subject: Arizona Development



Oil and Gas Conservation Commission
State of Arizona
3500 N. Central
Suite 312
Phoenix, Arizona

Attention: Mr. W. F. Maule

Gentlemen:

Please refer to your letter of July 14, 1960, which inquired as to plans that Pan American may drill several wells in Mohave County, Arizona. While it is true that Pan American has recently purchased an interest in a portion of the acreage held by Sun Oil Company in Mohave County, we have no present plans for development in this area.

Yours very truly,

PAN AMERICAN PETROLEUM CORPORATION

L. O. Speer, Jr.
L. O. Speer, Jr.
Area Superintendent

GWE:en

July 14, 1960

Pan American Petroleum Corp.
Box 480
Farmington, New Mexico

Attention: Mr. L. O. Speer, Jr.
Area Superintendent

Dear Mr. Speer:

We are returning your file copy of the plugging record
of Tohlacon, Navajo #1, well, Apache County, Arizona.
Thank you very much.

We have heard several rumors that Pan American may possibly
dig several wells in Mohave County, individually or with
Sun Oil. Strictly for our information, can you tell me if
there is any truth to these rumors. I am sure you realize
we are deeply interested in the exploration program of the
various companies in our State.

Any information regarding this matter that you can release
to us will be greatly appreciated.

Yours very truly,

W. F. Maule
Petroleum Engineer

WFM/ew
Enclosure

PAN AMERICAN PETROLEUM CORPORATION

Box 480, Farmington, New Mexico
July 13, 1960

File: B-2255-400.1

Subject: Plug and Abandonment
Tohlacon Navajo No. 1
Apache County, Arizona

Oil and Gas Conservation Commission
State of Arizona
3500 N. Central Ave., Suite 312
Phoenix, Arizona

Attention: Mr. W. F. Maule
Petroleum Engineer

Dear Sir:

Please find attached the plugging record, Form P-15, for Pan American's Tohlacon Navajo No. 1 in Section 11, T-40-N, R-25-E, Apache County, Arizona.

As you will note, the well was plugged and abandoned on April 19, 1960. However, submittal of the plug and abandonment information has been delayed to the present time until drill pipe left on location was removed. The location is now ready for your inspection.

Yours very truly,

PAN AMERICAN PETROLEUM CORPORATION

L. O. Speer, Jr.
L. O. Speer, Jr.
Area Superintendent

RMB:hh

Attach.

July 8, 1960

Pan American Petroleum Corp.
P. O. Box 487
Farmington, New Mexico

Attention: Mr. R.M. Bauer, Jr.
Area Engineer

Dear Mr. Bauer:

We have not received your plugging record, Form 15,
on your Tohlacon Navajo #1 well, Section 11, T. 40S,
25E, Apache County, Arizona.

Please advise this office as to whether the well has
been plugged, and if such is the case, forward the
plugging record so that we may close the file on this
well.

Sincerely,

W. F. Maule
Petroleum Engineer

WFM/ew

XXXXXXXXXXXX

March 31, 1960

Anthony T. Deddens
Member

PAN AMERICAN PETROLEUM CORPORATION
P. O. Box 487
Farmington, New Mexico

ATTN: Mr. R. M. Bauer, Jr.,
Area Engineer

RE: Application to Abandon & Plug

Gentlemen:

We enclose herewith, an approved copy of your Application to Plug and Abandon the TOHLACON NAVAJO NO. 1 WELL, SEC. 11, T-40-S, R-25-E, APACHE COUNTY, ARIZONA. Upon completion of plugging, file the Plugging Record, Form #15 within thirty (30) days.

We sincerely hope you will consider our State in your future exploration and drilling program.

Thank you for your compliance with our Rules.

Sincerely yours,

W. F. "Bill" Maule,
Petroleum Engineer

WFM:mar

Enclosure:

Form letter sent February 23, 1960 by instructions
of Petroleum Engineer, U.S. Marine.

EE

August 12, 1959

Pan American Petroleum Corporation
P. O. Box 487
Farmington, New Mexico

Attention: L. O. Speer, Jr., Your File: B-2267-400.1
Area Superintendent

Dear Mr. Speer:

Thank you for your letter of August 6th regarding your removal of the Tohlacon Navajo No. 1 from tight classification.

This office will no longer treat the records and data from this well as confidential.

Very truly yours,

OIL AND GAS CONSERVATION COMMISSION

Frederick C. Ryan,
Acting Executive Secretary

FCR:MB

PAN AMERICAN PETROLEUM CORPORATION

P. O. Box 487, Farmington, New Mexico
August 6, 1959

File: B-2267-400.1

Subject: Release of Well Data
Tohlacon Navajo No. 1
Apache County, Arizona

State Land Commissioner
State Land Department
422 Arizona State Office Building
Phoenix, Arizona

Attention: Mr. Frederick C. Ryan
Supervisor Oil and Gas Conservation

Gentlemen:

Please refer to our letter of June 23, 1959, File: B-2207-400.1, wherein we requested confidential handling of the well information from our Tohlacon Navajo No. 1 in Apache County, Arizona.

The Tohlacon Navajo No. 1 has been removed from its tight hole classification and information from the well is being made available to the industry. Accordingly, the well data previously submitted to the State Land Commissioner need no longer be treated as confidential by your office.

We appreciate your consideration in keeping the information confidential to the present time.

Very truly yours

PAN AMERICAN PETROLEUM CORPORATION



L. O. Speer, Jr.
Area Superintendent

RMB:cw

000063



PAN AMERICAN PETROLEUM CORPORATION

Box 487, Farmington, New Mexico
June 23, 1959

File: B-2207-400.1

Subject: Well Information
Tohlacon Navajo No. 1
Apache County, Arizona

CONFIDENTIAL INFORMATION

State Land Commissioner
State Land Department
422 Arizona State Office Building
Phoenix, Arizona

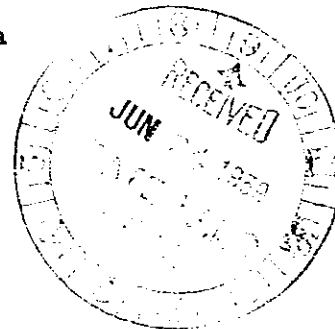
Attention: Mr. Frederick C. Ryan
Supervisor Oil and Gas Conservation

Dear Sir:

We are transmitting herewith two copies of Form No. P-7, Well Completion or Recompletion Report and Well Log, and a copy of the Induction-Electrical, Gamma Ray-Neutron, Sonic Log, and Microlaterolog well surveys for our Tohlacon Navajo No. 1, Apache County, Arizona. This well was temporarily abandoned December 30, 1958, and a complete well history is included with Form No. P-7.

The disposition of sample cuttings and core chips from Tohlacon Navajo No. 1 was recently discussed by Mr. Johnson of the State Land Department and Mr. Strawn of our Exploration Department, and is being handled in accordance with the procedure outlined in Mr. Johnson's letter to this office dated September 17, 1958. These were released to the Four Corners Sample Cut June 11, 1959, for confidential handling and distribution only to the State of Arizona.

While the Arizona Statewide Rules and Regulations do not provide for keeping well reports, logs, and samples confidential beyond an initial six-month period after completion or abandonment of an oil and gas test well, it is our understanding that the State Land Department has provision for administrative action to hold well data confidential for a longer period. It is therefore respectfully requested that the information and samples from Tohlacon Navajo No. 1 be held in confidential status by the State Land Department for as long a period as practicable in view of the lease and acreage situation in this part of Arizona.



-2-

State Land Commissioner
Phoenix, Arizona

June 23, 1959
File: B-2207-400.1

We would appreciate your letting us know the length of time for which the well data might be retained as confidential if this request is granted.

Yours very truly,

PAN AMERICAN PETROLEUM CORPORATION

L. O. Speer, Jr.
L. O. Speer, Jr.
Area Superintendent

RMB:fh

CC w/o attach: Mr. Phillip W. Johnson
Geologist
State Land Department
Phoenix, Arizona

FORM 829 2-57

PAN AMERICAN PETROLEUM CORPORATION

(FORMERLY STANOLIND OIL AND GAS COMPANY)

OIL AND GAS BUILDING

FORT WORTH, TEXAS

E. V. HEWITT
DIVISION PRODUCTION SUPERINTENDENT

January 19, 1959

File: C-94-993.1

Subject: Organization Report - Pan
American Petroleum Corporation
State of Arizona

State Land Commissioner
Land Office
Phoenix, Arizona

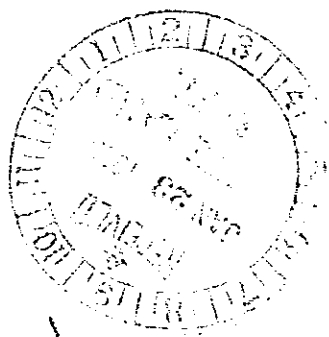
Dear Sir:

We are attaching original of Supplementary Report which reports changes in the original Organization Report filed with your office in behalf of Pan American Petroleum Corporation under date of August 7, 1958. The new Organization Report is dated January 16, 1959.

Yours very truly,

E. V. Hewitt

GDB:ncb
Attachment



10/12

NEW YORK, N.Y.
OCT 12 1942

NEW YORK, N.Y.
OCT 12 1942

NEW YORK, N.Y.
OCT 12 1942

NEW YORK, N.Y.

NEW YORK, N.Y.

PAN AMERICAN PETROLEUM CORPORATION

Post Office Box 1714
Albuquerque, New Mexico

September 30, 1958

Re: Pan American Petroleum Corporation
No. 1 Tohlacon Navajo

Mr. Phillip W. Johnson
State Land Department
State of Arizona
Phoenix, Arizona

Dear Mr. Johnson:

This letter has reference to your letter dated September 17, 1958, directed to our Mr. L. O. Speer, Jr. in Farmington, New Mexico. We wish to advise you that we are presently catching a regular cloth bag of each ten foot interval and will accordingly reserve a sufficiently large sample of any cored interval, and these samples and cores will be released to the Four Corners Sample Cut. This release to the Four Corners Sample Cut will be effected as soon as possible after the above-referenced well is removed from its confidential status.

If further information is desired, please advise.

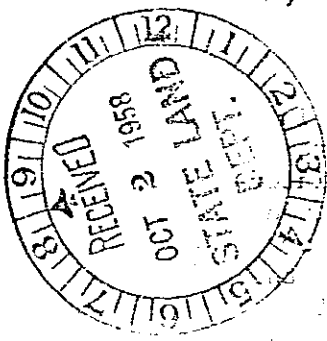
Very truly yours,

PAN AMERICAN PETROLEUM CORPORATION

W. C. Imbt
W. C. Imbt
District Exploration Superintendent

JWR:mrh

cc: Mr. L. O. Speer, Jr.



TO: [illegible]
FROM: [illegible]
SUBJECT: [illegible]
[illegible text follows]

DATE: [illegible]
TIME: [illegible]
[illegible text follows]

September 17, 1958

Mr. L. O. Speer, Jr.,
Field Superintendent
Pan American Petroleum Corporation
Box 487
Farmington, New Mexico

Dear Mr. Speer:

RE: Pan American Petroleum Corporation;
Tehlacan Navajo No. 1

I am writing you to acquaint you with the collection of sample cuttings from all oil test wells drilled in Arizona and to request your cooperation in helping us to carry out this program.

Under the law it is mandatory that samples of cuttings taken of all oil and gas test wells, as well as logs and other pertinent information be filed with the State Land Commissioner within six months after completion or abandonment. The over-all policy of the collection and preservation of samples has been a joint venture between the State Land Department, the U. S. Geological Survey, Ground water Branch, University of Arizona and the Museum of Northern Arizona. Under this program samples of all types of wells are collected and cut two or three ways depending upon the type and location of the well. All oil test wells in the northern part of the State (plateau region) are cut three ways, and all oil test wells in the southern part are cut two ways.

Inasmuch as your test well is in the northern part of the State, we require large enough samples in order that they can be cut three ways: one sample for the loan library at the State Land Department, one sample for the permanent library at the University of Arizona, Tucson, Arizona, and one sample for the Research Center, Museum of Northern Arizona at Flagstaff, Arizona. Arrangements have been made with Mrs. Annabelle Smith, Manager of the Four Corners Sample Cut, Farmington, New Mexico to handle our samples. I would appreciate it if you could arrange with your representative in charge of the well to take these samples to the Four Corners Sample Cut.

I presume that you will be collecting samples at 10' intervals, or less, and that possibly you will also do some coring. We would appreciate getting core chips samples and copies of whatever logs you run. If we can be of any further service, please feel free to call on us.

Very truly yours,

Phillip W. Johnson,
Geologist

PWJ:mb

PAN AMERICAN PETROLEUM CORPORATION

Box 487, Farmington, New Mexico
September 11, 1958

File: B-2328-400.1

Subject: Well Elevation
Tohlacon Navajo No. 1
Apache County, Arizona

State Land Commissioner
State of Arizona
Phoenix, Arizona

Attention: Mr. Frederick C. Ryan
Supervisor Oil and Gas Conservation

Gentlemen:

As requested in your letter of September 4, 1958, transmitting the approved Notice of Intention to Drill for our Tohlacon Navajo No. 1, we are submitting the below listed well elevations:

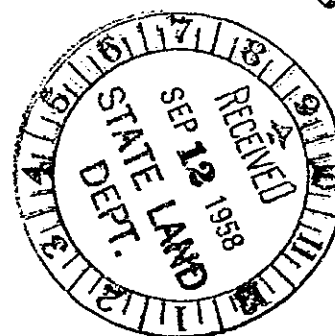
Ground Level Elevation	5297 feet
Rotary Drive Bushing above Ground Level	12 feet
Rotary Drive Bushing Elevation	5309 feet

Yours very truly,

PAN AMERICAN PETROLEUM CORPORATION

L. O. Speer, Jr.
L. O. Speer, Jr.
Field Superintendent

RMB:ep



September 4, 1958.

Pan American Petroleum Corporation
P. O. Box 487
Farmington, New Mexico

Attention: Mr. L. O. Speer, Jr.
Field Superintendent

Dear Mr. Speer:

Transmitted herewith is the fee receipt and your copy of the approved Notice of Intention to Drill covering Pan American Petroleum Corporation - Tohlacon Navajo No. 1, located in Section 11, Township 40 N, Range 25 E. This approved Intent constitutes your Permit No. 60, dated August 28, 1958.

Referring to my telephone conversation of August 26th with your Mr. D. J. Scott concerning improper execution of your blanket bond by Seaboard Surety, this discrepancy was cleared by a letter from Seaboard received by this office on August 27th. Pan Americans counter part copies are being forwarded this date to your Fort Worth office per instructions.

If we may be of further assistance do not hesitate to call on us.

Yours very truly,

STATE LAND COMMISSIONER

By: Frederick C. Ryan
Supervisor
Oil & Gas Conservation

FCR:sw
encl.

P.S.
Would appreciate receiving elevations as
soon as practicable

SLR

September 4, 1958.

Pan American Petroleum Corporation
Oil & Gas Building
Fort Worth, Texas

Attention: Mr. J. G. Crosskill
Division Clerk

Dear Mr. Crosskill:

Reference is made to your file C-1609-980.3
x 993.1 concerning Pan American Petroleum
Corporation \$10,000 blanket drilling bond -
State of Arizona.

Transmitted herewith are three executed
counter part copies of the bond as per in-
structions of Seaboard Surety Company. Also
enclosed is a copy of Seaboard's letter of
August 25, 1958, authorizing this office to
insert the witness line date on each copy.

If we can be of further assistance please
call on us.

Yours very truly,

STATE LAND COMMISSIONER

By: Frederick C. Ryan
Supervisor
Oil & Gas Conservation

FCR:sw
encl.

SEABOARD SURETY COMPANY

NEW YORK, N. Y.

RAY ROSENDAHL CO.

UNDERWRITING MANAGERS
SAN FRANCISCO • LOS ANGELES

DUnkirk 2-6231
610 SOUTH KINGSLEY DRIVE
LOS ANGELES 5

August 25, 1958

State Land Department
State of Arizona
Phoenix, Arizona

Attention: Mr. Frederick C. Ryan

Re: Bond No. 522932 C/S
Pan American Petroleum Corporation

Gentlemen:

This is in reply to your letter of August 21, 1958.
Please accept this letter as authority to insert the
date of August 7, 1958 on the witness date line.

Thank you for calling this to our attention.

Very truly yours,

SEABOARD SURETY COMPANY

Howard Siskel
Howard Siskel

HS:mv



13115

[Faint, mostly illegible text, possibly a letter or report, consisting of several paragraphs.]

August 21, 1958

Ray Rosendahl Company
Underwriting Managers,
Seaboard Surety Company
610 South Kingsley Drive
Los Angeles 5, California

Attention: B. H. Mather

Gentlemen:

This is to acknowledge receipt of Seaboard Surety Company Bond 522932 C/S in five counter parts, a blanket oil well bond to cover Pan American Petroleum Corporation's Arizona drilling activities and transmitted by your letter dated August 18, 1958.

Everything is in good order with the exception of the witness date line of the attorney in fact for the surety. This date, according to your notarization, apparently should be August 7, 1958. With your permission, the date August 7, 1958, or other date if you so specify, will be filled in by this office on each of the bond forms.

With this accomplished, the distribution requested of the approved copies will be made.

Very truly yours,

STATE LAND COMMISSIONER

By: Frederick C. Ryan,
Supervisor,
Oil and Gas Conservation

FCR:mb

60

SEABOARD SURETY COMPANY

NEW YORK, N. Y.

RAY ROSENDAHL CO.

UNDERWRITING MANAGERS
SAN FRANCISCO • LOS ANGELES

DUnkirk 2-6231
610 SOUTH KINGSLEY DRIVE
LOS ANGELES 5

August 18, 1958

State Land Commissioner's Office
State of Arizona
Phoenix, Arizona.

Gentlemen:

Re: Bond 522932 C/S -- Pan American Petroleum Corporation
\$10,000 Blanket Oil Well Bond -- State of Arizona

Enclosed herewith, in five counterparts is bond as described in caption, together with two (2) copies of Organization Report, which has been executed by the principal.

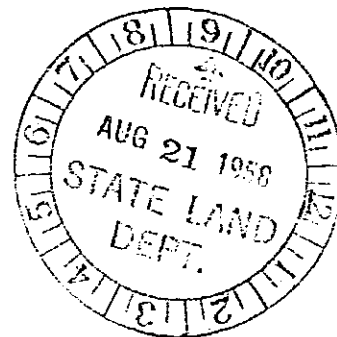
After this bond has had the approval of your office, the principal would like you to forward them three copies of the bond. These should be sent to Mr. J. G. Crosskill, Division Clerk, Pan American Petroleum Corporation, Oil and Gas Building, Fort Worth, Texas. Reference should be made to their file C-1609-980.3 x 993.1.

Yours very truly,

B. H. Mather
B. H. Mather.

m

12796



June 10, 1958

Pan American Petroleum Corporation
Box 487
Farmington, New Mexico

Attention: L. O. Speer, Jr.

Gentlemen:

Reference is made to your letter of June 4, 1958 concerning your request for additional Arizona forms and regulations.

We are glad to transmit under separate cover those reporting forms in the numbers requested with the exception of O&G 58, Transporter's and Storer's Monthly Report, which is temporarily out of stock and G-309, Affidavit of Compliance with Restrictions, which is no longer required by the Water Division of the Land Department.

Additionally being transmitted are four copies of the current Oil and Gas Conservation Rules and Regulations and four copies of the Oil and Gas Act of 1951, source Act for the current rules. The latter, although not in statute form, should be useful to your organization in filling in those gaps caused by brevity in the Rules and Regulations. Finally, the four copies of the bulletin, Summary of Groundwater Law of Arizona being forwarded has been re-numbered as Bulletin No. 302.

In answer to your question regarding substitution of U.S.G.S. forms in certain reporting categories, may we say that we do not accept the Federal forms in lieu of our own. However, we do anticipate going along with the Interstate Oil Compact Commission uniform reporting system in the near future to the degree which existing statute will permit.

Please call on us any time we can be of service to you in any way.

Very truly yours,

STATE LAND COMMISSIONER

By: Frederick C. Ryan,
Supervisor,
Oil and Gas Conservation

PAN AMERICAN PETROLEUM CORPORATION

Box 487, Farmington, New Mexico
June 4, 1958

File: S-611-980.3

Subject: Arizona State Forms & Regulations

Mr. Frederick C. Ryan
Supervisor, Oil & Gas Conservation
State Land Department
State of Arizona
422 State Office Building
Phoenix, Arizona

Dear Sir:

Reference is made to exchange of correspondence between Pan American and your office ending with your letter dated May 16, 1958, with copies of Arizona regulations and forms concerning oil and gas conservation. We wish to take this opportunity to thank you for your prompt reply and information furnished.

It would be appreciated if your office could furnish the following Arizona oil, gas, and water conservation forms:

Form No.	Title of Form	Number Required
	<u>BOND</u>	6 ✓
OG 50	Organization Report	6 ✓
OG 51	Notice of Intention to Drill	10 ✓
OG 52	Well Completion Report	10 ✓
OG 53	Capacity Test Report	10 ✓
OG 54	Shooting or Treating Report	10 ✓
OG 55	Application to Deepen, Plug, etc.	10 ✓
OG 56	Abandonment and Plugging Record	10 ✓
OG 57	Producer's Certificate of Compliance	10 X - SEE ATTACHED
OG 58	Transporter's and Storer's Monthly Report	10 X
OG 62	Producer's Monthly Report	10 ✓
OG 63	Report on Test of Water Shut-off	10 ✓
OG 65	Well Status Report and Gas-Oil Ratio	10 ✓
G-300	Notice of Intention to Drill Well	6 ✓
G-301	Report of Well Driller	6 ✓
G-306	Report of Equipment Installed	6 ✓
G-309	Affidavit of Compliance With Restrictions	6 X
G-310	Report of Groundwater Withdrawal	6 ✓

NOT REQUIRED

REPLACED
NO 300

In addition to the above please forward four copies of Bulletin No. 301, a Summary of Groundwater Law of Arizona, four copies of Article II, Chapter III, General Rules and Regulations Governing the Conservation of Oil and Gas in Arizona, Statewide Rules and Regulations, and four copies of Chapter III,

plus 4 copies of Act '51 + 4 of HB. 300

- 2 -

Mr. Frederick C. Ryan
Phoenix, Arizona

June 4, 1958
File: S-611-980.3

Oil and Gas Conservation Division, General Rules and Regulations Governing
the Conservation of Oil and Gas in Arizona.

It is our opinion that the majority or all the wells that may possibly be drilled by Pan American in Arizona will be drilled on Federal Indian lands. In view of the fact that some states conservation commissions allow the operator to file copies of U.S.G.S. forms covering drilling operations in lieu of state forms, we would appreciate your advising whether or not this procedure may be followed in Arizona. In other words, rather than filing Arizona Forms Nos. OG-51, OG-52, OG-54, OG-55, OG-56, and OG-63, covering any future wells that might be drilled on Federal land in Arizona, would it be permissible instead to furnish your office with copies of corresponding U.S.G.S. forms? This procedure, of course, would save considerable paper work on the part of this office and at the same time would furnish you with essentially the same information as reported on the Arizona forms.

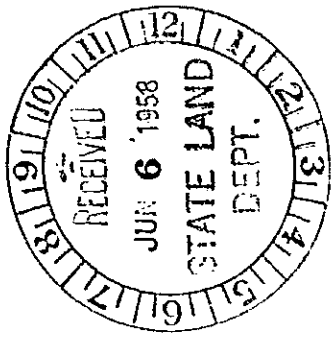
Any suggestions or comments that you have relative to this matter would be greatly appreciated.

Yours very truly,

L. O. SPEER, JR.

By: *J. R. Stuckert*

DJS:ep



8854

May 16, 1958

Pan American Petroleum Corporation
Box 487
Farmington, New Mexico

Attention: Mr. L. O. Speer, Jr.,
Field Superintendent

Dear Mr. Speer:

Reference is made to your request of May 14, 1958, your file S-525-980.3, for copies of Arizona Regulations and forms concerning Oil and Gas Conservation.

We are transmitting, under separate cover, copies of such material pertinent to the operations you have in mind. If you have need of additional copies of particular forms, we shall be glad to forward them promptly upon request.

Additionally, we are sending along Bulletin 302 of the Land Department, which summarizes the Ground Water Law of Arizona.

If there is anything further we can do, please call on us.

Very truly yours,

STATE LAND COMMISSIONER

By: Frederick C. Ryan,
Supervisor,
Oil & Gas Conservation

FCR:mb

PAN AMERICAN PETROLEUM CORPORATION

Box 487, Farmington, New Mexico
May 14, 1958

File: S-525-980.3

Subject: State Forms and Regulations

State of Arizona
Oil and Gas Conservation Committee
Phoenix, Arizona

Gentlemen:

It would be appreciated if your office would furnish copies of State of Arizona regulations and other pertinent data covering drilling and producing operations of oil, gas, and water wells on fee and state lands, as well as federal (including Indian) lands. We are acquainted with U.S.G.S. regulations; however, we need to know what reports, etc., are required by the State of Arizona covering drilling operations on federal lands.

It would also be appreciated if your office could furnish us with a supply of drilling and production forms to be filed in the event that Pan American Petroleum Corporation should start any operations in the State of Arizona.

Yours very truly,

L. O. Speer, Jr.
L. O. Speer, Jr.
Field Superintendent

DJS:ep

